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BY THE U.S. GENERAL ACCOUNTING OFFICE

## Report To The Secretary Of The Navy

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# Navy Manpower Management: Continuing Problems Impair The Credibility Of Shore Establishment Requirements

Congress has long encouraged the Navy to develop a more rigorous and credible system to determine manpower requirements for its shore establishment. In response, the Navy implemented its SHORSTAMPS (Shore Requirements, Standards, and Manpower Planning System) Program in 1976. Because of dissatisfaction with this program, the Navy, in 1983, approved an alternative--the Shore Manpower Documents (SHMD) Program. The Navy expects this new program to succeed where SHORSTAMPS did not.

GAO found major problems in SHORSTAMPS and some potential problems in SHMD. Many of these problems are technical ones, such as limited coverage by standards developed through accepted work measurement techniques or methods-improvement studies. However, GAO believes that the most serious problems are a lack of management oversight and inadequate controls at all levels. Despite these problems, GAO believes that SHORSTAMPS and SHMD are better than no system at all and ought to be improved rather than abandoned.



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GAO/NSIAD-85-43  
MARCH 7, 1985

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UNITED STATES GENERAL ACCOUNTING OFFICE  
WASHINGTON, D.C. 20548

NATIONAL SECURITY AND  
INTERNATIONAL AFFAIRS DIVISION

B-197077

The Honorable John F. Lehman  
The Secretary of the Navy

Dear Mr. Secretary:

This report, "Navy Manpower Management: Continuing Problems Impair the Credibility of Shore Establishment Requirements" (NSIAD-85-43), is the first in a series on the Navy's manpower requirements determination programs. It raises questions about the credibility of Navy shore establishment requirements generated by the former SHORSTAMPS program and points out some potential problems in the new Shore Manpower Documents (SHMD) program.

This report also contains recommendations to you on pages 36-41. As you know, 31 U.S.C. 720 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Chairmen of the above committees; the Chairmen, Senate and House Committees on Armed Services; the Secretary of Defense; and the Director, Office of Management and Budget.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Frank C. Conahan".

Frank C. Conahan  
Director

Enclosure



GENERAL ACCOUNTING OFFICE  
REPORT TO THE SECRETARY  
OF THE NAVY

NAVY MANPOWER MANAGEMENT:  
CONTINUING PROBLEMS IMPAIR  
THE CREDIBILITY OF SHORE  
ESTABLISHMENT REQUIREMENTS

D I G E S T

Over two-thirds of the Navy's military and civilian work force, costing over \$12 billion, are in shore-based jobs. Having the right number and kinds of people to do these jobs is important because not having enough workers could affect military capability while having too many would be unnecessarily costly. The Congress has on several occasions prodded the Navy to develop a more rigorous and credible system to justify its shore-based manpower needs. A manpower-planning system based on the work measurement techniques successfully used in private industry would be responsive to congressional desires.

In response to congressional concerns, the Navy has been developing a system for determining and justifying its total shore-based manpower requirements since 1972. This system, known as SHORSTAMPS (Shore Requirements, Standards, and Manpower Planning System), was officially adopted in March 1976. In December 1983, SHORSTAMPS became a component of the newly formed Navy Manpower Engineering Program (NAVMEP), the aggregate name given after several existing manpower programs were incorporated under one umbrella program.

GAO conducted this review in order to provide an assessment of the Navy's progress toward implementing SHORSTAMPS. Specific objectives were to assess whether improvements have been made in

- the Navy's shore-based manpower management,
- the accuracy of workload data, and
- the oversight of manpower planning at the Chief of Naval Operations (CNO) and Command headquarters and of the application and use of staffing standards at the unit (user) level.

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GAO did not address the accuracy of the mathematical algorithms used in the staffing standards nor the technicalities of any individual standards.

Although the Navy has made progress in managing its shore-based manpower by adopting work measurement concepts and methods, SHORSTAMPS and NAVMEP fall short of meeting congressional expectations for rigor and credibility. This is due primarily to the Navy's lack of oversight of manpower planning and to various continuing technical problems, such as budgeting, personnel, procedures, and data. In GAO's opinion, correcting the technical problems alone will not be sufficient to result in increased use of staffing standards. (See pp. 25-26, 35-41.) GAO believes that the key reason manpower standards are not used is the absence of monitoring and enforcement at all levels.

CONTINUING PROBLEMS DELAY SHORSTAMPS  
DEVELOPMENT, USE, AND ACCEPTANCE

SHORSTAMPS calls for the application of work measurement techniques to determine total manpower requirements--military, civilian, and contractor--for the shore establishment. A 1980 GAO report on SHORSTAMPS found a number of problems. (See pp. 54-57.) The current review found that many of those problems continue to exist:

- Most of the Navy's shore manpower is not covered by SHORSTAMPS standards. The Navy's shore-based authorizations total approximately 600,000. By August 1983, approved SHORSTAMPS standards reports existed for only about 217,500 of those authorizations. (See p. 8.)
- Some contributors to the Navy's slow rate of progress toward achieving coverage of the shore establishment include (1) erratic budgeting of the program, (2) poor and unusable contractor products, and (3) little emphasis on managing and retaining trained analysts. (See pp. 8-12.)
- While the Navy has recognized the importance of performing methods-improvement studies--which involve examinations of actual work processes and workflows in order to identify

unnecessary, duplicative, or inefficient procedures--and intended to perform them during the standards-revision phase, these studies are still not being performed. (See pp. 12-13.)

- The Shore Required Occupational Capability (SHOROC) subsystem of SHORSTAMPS contains current and future workload projections submitted by individual shore activities. Although these workload projections are an important determinant of manpower requirements, none of the major commands GAO visited was ensuring that the SHOROC values submitted by activities were accurate. GAO tested the accuracy of the SHOROC subsystem data inputs for workload projections at 23 Navy activities. GAO was unable to verify 40 percent of the values because no audit trail existed. For the values able to be checked, a 48-percent error rate was found, including both understatements and overstatements of workload. The Navy Manpower Requirements System was used to assess the effect of the erroneous values on the 57 functions to which they applied. The use of the erroneous workload projections resulted in an overstatement of manpower requirements in 16 cases and understatements in 19 cases, and had no effect in 22 cases. (See pp. 13-18.)
- Although 72 standards reports had been approved for use by early FY 1983, four of the five major commands GAO visited were not using the system in accordance with the approved implementation instruction. The problems found included commands believing that the implementation of standards was optional, not using standards to manage civilian manpower authorizations, not considering all available manpower alternatives, and not reapplying standards annually. (See pp. 18-23.)
- Impediments to the use of standards included perceptions that (1) some standards were inaccurate, (2) automated capability was needed to relate SHORSTAMPS requirements to authorizations, and (3) since using standards was not an essential element of budget success, there was no incentive to use SHORSTAMPS. (See pp. 23-25.)

NAVMEP MAY NOT IMPROVE  
NAVY MANPOWER MANAGEMENT

Because the Navy was dissatisfied with SHOR-STAMPS, it approved in December 1983 an alternative, the Shore Manpower Documents (SHMD) program, which is incorporated under an umbrella program called the Navy Manpower Engineering Program (NAVMEP). The Navy expects NAVMEP to provide improved manpower planning by consolidating all of Navy's existing manpower determination programs and modifying the standards-development process in order to achieve 100-percent coverage in 2 years. (See pp. 28-30.)

But will NAVMEP be better? GAO believes that NAVMEP's potential is endangered by methodological weaknesses and budget instability. (See pp. 30-33.) Technical problems which GAO believes threaten the success of NAVMEP include the following:

- The modifications which NAVMEP is planning to make to the standards-development process are likely to sacrifice accuracy and efficiency in the interest of meeting the timetable.
- The planned use of macro-models, which identify manpower requirements based on an aggregate measure of workload, is likely to decrease the accuracy and credibility of manpower requirements. Previous studies by GAO, the Navy, and the Department of Defense (DOD) have identified numerous problems with the work measurement systems and data bases which are used by the macro-models. (See pp. 31-32.)
- The use of so-called engineered estimates and "proxies" as a substitute for standards in order to achieve full coverage within 2 years could discredit the entire program because they are not based on accepted work measurement techniques. (See p. 32.)

TECHNICAL PROBLEMS AFFECTING  
SHORSTAMPS AND NAVMEP NEED  
TO BE CORRECTED

To address the many technical problems cited above, GAO makes a number of recommendations concerning

- providing funding stability for the staffing-standards program,
- establishing a manpower-management career field,
- reconsidering the use of macro-models by NAVMEP,
- avoiding the use of potentially misleading terminology,
- performing methods-improvement studies,
- providing adequate resources for incorporating methods-improvement studies into the standards-development process,
- ensuring the accuracy of workload parameter values, and
- eliminating impediments to the use of standards. (See pp. 37-40.)

THE PRIMARY PROBLEM WITH THE NAVY'S SHORE MANPOWER PROGRAM IS THE ABSENCE OF MONITORING AND ENFORCEMENT

While conceptually both SHORSTAMPS and NAVMEP appear sound, in practice they fall short. However, GAO believes that these programs are better than no system at all and ought to be improved rather than abandoned.

GAO found that, although SHORSTAMPS and NAVMEP both have a number of defects, the key problem has been the absence of monitoring and enforcement. GAO believes that the Navy should require the use of staffing standards to determine and manage shore manpower in accordance with CNO promulgation and implementation instructions. GAO therefore recommends that the Secretary of the Navy direct the CNO to require commands to

- certify that they have reprogrammed authorizations and resources (both military and civilian) to conform to requirements generated by approved SHORSTAMPS standards;

--submit SHORSTAMPS justifications for any manpower increases requested in any function for which an approved SHORSTAMPS standard exists;

--certify that they have reapplied all applicable standards before each budget cycle; and

--maintain local records to support and document the initial application and periodic reapplications of the standards. (See p. 36.)

GAO also recommends that the Secretary of the Navy direct the CNO to

--assign explicit responsibility and authority for monitoring and enforcing the use of manpower standards. (See p. 36.)

With regard to NAVMEP, GAO is concerned that the use of less rigorous standards determination processes in the interest of rapidly increasing coverage and gaining user acceptance may compromise the credibility of the program and its objectives. GAO therefore recommends that the Secretary of the Navy

--establish a program to systematically examine for soundness/rigor all standards, methodologies, and processes to be used by NAVMEP to determine manpower requirements, and

--introduce acceptable work measurement techniques where feasible. (See p. 37.)

#### AGENCY COMMENTS AND GAO'S EVALUATION

DOD provided GAO with official comments on a draft of this report. (The full text of DOD's comments is in app. V beginning on p. 58.) These comments have been incorporated as appropriate. Defense generally agreed with the findings of this report, and outlined Navy actions to address most of the problems. (See pp. 26-27, 33-34, and 40-42.)

DOD did disagree with GAO's recommendation that a career field for military personnel in the area of manpower management be established. DOD believes that Navy's current system using subspecialty and secondary skill designators

allows them to develop and utilize sufficient manpower-management expertise. DOD also stated that the amount of retouring that can be accomplished is limited because many of the personnel working in the manpower area have primary skills that are in demand in the fleet. (See pp. 26-27 and 42.)

GAO believes that the establishment of a manpower-management career field would benefit the Navy by providing career incentives necessary to attract and retain quality personnel in the manpower area, increasing the professionalism of Navy manpower managers, and reducing the number of personnel with high-demand operational skills that are diverted into manpower-management jobs. (See pp. 26 and 42.)



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### Abbreviations

BOC	Billet Occupation Classification
CA	Commercial Activities
CINCLANTFLT	Commander-in-Chief, U.S. Atlantic Fleet
CNM	Chief of Naval Material
CNO	Chief of Naval Operations
DOD	Department of Defense
ER	Efficiency Review
GAO	General Accounting Office
MANCLASS	Manpower Claimant Access Support System
MEM	Manpower Estimating Model
MEO	Most Efficient Organization
MPTA	Manpower, Personnel and Training Analysis
NAS	Naval Audit Service
NAVMEP	Navy Manpower Engineering Program
NAVMMAC	Navy Manpower and Material Analysis Center
NMDAS	Navy Manpower Data Accounting System
NMRS	Navy Manpower Requirements System
PPBS	Planning, Programming, and Budgeting System
RFC	Required Function Capabilities
SHMD	Shore Manpower Document
SHOROC	Shore Required Operational Capability
SHORSTAMPS	Shore Requirements, Standards, and Manpower Planning System
SMD	Ship Manpower Documents
SQMD	(Air) Squadron Manpower Documents
TFMMS	Total Force Manpower Management System

## CHAPTER 1

### INTRODUCTION

In an era in which great emphasis is being put both on building up our national defense system and on controlling government costs and balancing the federal budget, the use of military personnel deserves special attention. Consequently, the President and the Congress need assurance that the military services are using their personnel resources efficiently, effectively, and economically.

One means of providing this assurance would be an accurate, reliable manpower<sup>1</sup> planning system. Such a system would provide agency management with sound data for making decisions on staffing needs and apportionments. The agency would thereby be able to manage its work force more effectively and to develop credible, defensible personnel budgets.

### THE IMPORTANCE OF HAVING AN EFFECTIVE MANPOWER-PLANNING SYSTEM

Manpower-planning systems are essential to the effective and economical management of the military services with their large workforces (4 to 5 million people). These systems determine military manpower requirements--how many and what kind of people are needed to carry out the missions of the various services. Having too few or the wrong kinds of people can seriously impair our military capability, while having too many people can increase costs unnecessarily and divert resources from other needs. Therefore, the ability of the services to accurately identify through sound/rigorous processes the quantity and quality of manpower needed for national defense is a key concern to decision-makers in Congress, the Office of Management and Budget, the Office of the Secretary of Defense, and the services.

An important reason to be concerned about the soundness/rigor of manpower requirements is military capability. A great deal of our capability to withstand the large numerical (people and equipment) advantage of our potential military adversaries is attributed to our more sophisticated weapon systems. However, without the right numbers and kinds of people to operate and maintain these very costly weapon systems, our military capability would be greatly diminished. The legitimacy of this concern is supported by Department of Defense (DOD) studies which estimate that human errors account for at least 50 percent of the failure of major systems.

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<sup>1</sup>"Manpower," in the context of military personnel management, is a generic term used to refer to the demand for workers, regardless of gender.

Another key reason for concern about manpower requirements is cost. Over 40 percent (\$113.5 billion) of the DOD budget is related to military and civilian manpower. The increasing requirements for high-quality people coupled with the much smaller recruitable population in the next decade will likely push costs even higher, elevating the significance of having processes for determining manpower requirements that establish the most cost-effective workforce. In a system so large and costly, even very small improvements in the way manpower is managed can yield substantial dollar savings. A variance of only 1 percent in manpower requirements equates to over \$1 billion.

The criticality of manpower planning in the Navy is becoming even more important as the Navy continues to expand. As of February 1983, its shore-based authorizations were over two-thirds of its total authorizations and cost over \$12 billion. Moreover, the Navy's expansion to a 600-ship fleet will also require an increase in shore personnel. The need to manage and budget manpower effectively will be vital to holding down the costs of this expansion.

Conceptually, the key elements of an efficient and effective manpower-planning system are (1) sound staffing standards, (2) accurate measurement of workload, and (3) the rigorous application and use of staffing standards. Above all, the program must be well-defined, monitored, and enforced. (See app. I for a detailed description of the elements of an effective manpower-planning system.) Nationally recognized manpower experts and private-sector industrial engineering analysts confirm the success of this approach to manpower planning.

A staffing standard is a work measurement concept that identifies the number of workers needed to accomplish a given amount of work. It takes the form of an equation which computes the total man-hour requirements as a function of relevant workload factors. For example, the staffing standard for providing orthopaedic services would use the average number of monthly orthopaedic clinic outpatients and inpatients, the average number of monthly surgical cases, and the average eligible population as the determinants of the total man-hours required. A staffing table would then be constructed. This table converts those man-hours into the number and types of staff--such as number of orthopaedic surgeons and cast room technicians--needed to accomplish that work. (See app. II for a more detailed description of how standards are used to determine required manpower.)

Of all the military services, the Air Force has had the most experience with a formal manpower program which embodies such concepts and methods. Its experience indicates that manpower-planning systems using this approach can bring substantial benefits to military budgets. The Congress has applauded

the results of the Air Force's application of this approach. In fiscal year 1976, the Air Force, drawing on its work with staffing standards since 1961, reported gross savings of \$814 million in personnel costs over a 13-year period. Also, in the fiscal year 1977 appropriation hearings, the Air Force announced that it would reduce its active military strength by about 13,000 personnel and attributed the majority of these reductions to more efficient use of support personnel.

#### CONGRESSIONAL CONCERN OVER NAVY MANPOWER PLANNING

Cognizant congressional oversight and appropriations committees have been disturbed by the many problems that GAO and others have reported about the lack of rigor in the Navy's shore-based, manpower-determination process. They have also been generally dissatisfied with the Navy's personnel budget justifications. Consequently, the committees have urged the Navy to improve its manpower-planning capability. They believe that a manpower-planning system based upon sound work measurement techniques would be responsive to their desire for a more rigorous and credible system.

In 1972, in response to congressional demands, the Navy started designing a manpower-planning system called the Shore Requirements, Standards, and Manpower Planning System (SHOR-STAMPS). In the next year, it began incorporating into SHOR-STAMPS the development and use of staffing standards. Three years later, in March 1976, the House Committee on Armed Services acknowledged SHORSTAMPS and recommended that it receive priority attention in the allocation of fiscal and human resources. Three months later, in June, the Congress directed the Navy to speed up the development of the system. (See app. III for a description of the SHORSTAMPS program.)

Development, however, fell considerably behind the Navy's announced schedule. In March 1979, committees from both the House and the Senate questioned Navy officials closely on the program's slow progress, its problems, and the Navy's commitment to it. In May 1979, the House Committee on Armed Services concluded that the Navy's rate of progress was unacceptable and directed it to devise a new implementation plan immediately. The new plan, presented in October 1979, established 1987 as the new target date by which 70 percent of the Navy's shore population would be under staffing standards. In 1980, we examined the reasons for the Navy's slow progress in developing SHOR-STAMPS staffing standards.<sup>2</sup> At that time, we found a number of

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<sup>2</sup>The Navy's Shore Requirements, Standards, and Manpower Planning System (SHORSTAMPS)--Does the Navy Really Want It? (GAO/FPCD-80-29, Feb. 7, 1980).

problems hindering development and implementation of staffing standards and recommended ways to improve the program. (See app. IV for a summary of our findings, conclusions, and recommendations.)

In December 1983, the Navy's SHORSTAMPS program was redesignated the Shore Manpower Documents (SHMD) program and incorporated into another Navy manpower initiative called the Navy Manpower Engineering Program (NAVMEP). (See ch. 3.) NAVMEP also incorporated the Ship Manpower Documents (SMD) program and the Squadron Manpower Document (SQMD) program.

#### OBJECTIVES, SCOPE, AND METHODOLOGY

In order to provide the concerned congressional committees with an up-to-date assessment of the Navy's progress toward meeting the congressional mandate to establish a more rigorous and credible manpower requirements system and to assess the problems being encountered, we reviewed the Navy's progress in developing and using staffing standards to determine its shore-based manpower requirements. Our specific objectives were to assess whether the Navy has made improvements in

- its shore-based manpower management by developing
  - (1) staffing standards using accepted work measurement techniques for as much of the workforce as possible and
  - (2) standards based on the most efficient methods of the function under study;<sup>3</sup>
- the accuracy of workload data by (1) providing clear definitions and instructions for measuring workload and (2) ensuring the accuracy of workload data submissions; and
- the oversight of manpower planning at the Chief of Naval Operations (CNO) and Command headquarters and the application and use of staffing standards at the unit (user) level.

Since the SHORSTAMPS methodology for developing standards incorporates generally accepted industrial engineering techniques, we performed no in-depth examination of the standards-development process. Consequently, we addressed neither the accuracy of the mathematical algorithms used in the staffing standards nor the technicalities of any individual standard.

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<sup>3</sup>The process of determining the most efficient method of performing a given function or task is commonly referred to as a "methods-improvement study" or an "efficiency review."

We updated progress made since our 1980 report and discussed continuing problems with key officials at the following offices: the Deputy Chief of Naval Operations, Manpower, Personnel, and Training; the Secretary of the Navy; the Secretary of Defense; and the Navy Manpower and Material Analysis Centers, Atlantic and Pacific.

To study the use of standards, we visited five major commands, which control about 80 percent of shore-based manpower authorizations,<sup>4</sup> and 35 subordinate commands. We interviewed key officials about the use and problems of SHORSTAMPS; documented and analyzed the extent of the use of standards; tested the accuracy of reported data; and reviewed related policies, directives, and correspondence.

We conducted this review between October 1982 and January 1984. During this time, the Navy consolidated and reorganized its manpower management efforts under NAVMEP. While it was too early to evaluate the effects of this change, we were able to make some observations based on preliminary documentation. (See ch. 3.)

This review is part of a larger GAO effort involving the examination of the manpower programs across DOD. Once we have reviewed all the programs used by the services, we expect to be able to make a more definitive evaluation of each specific system and to make additional recommendations.

Our review was made in accordance with generally accepted government auditing standards.

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<sup>4</sup>The Chief of Naval Material; the Commander-in-Chief, U.S. Atlantic Fleet; the Commander-in-Chief, U.S. Pacific Fleet; the Chief of Naval Education and Training; and the Commander, Naval Medical Command.

## CHAPTER 2

### WEAKNESSES CONTINUE TO EXIST IN THE SHORSTAMPS PROGRAM

The Navy implemented the SHORSTAMPS program in order to correct known problems in its shore-based manpower-requirements program and to respond to congressional demands for improved rigor and credibility. The Navy has been developing this program for about 10 years, with over \$88 million having been funded for it through fiscal year 1984 and approximately \$40 million more planned for fiscal years 1985-89. Despite this investment, however, our current review of SHORSTAMPS found that most of the problems identified in our 1980 report continue to exist.<sup>5</sup>

The major problems lie in the areas of staffing standards, workload data, and enforcement and use of standards. With regard to staffing standards, we found that SHORSTAMPS does not cover the majority of the Navy's shore authorizations and that the standards-development process has not incorporated methods-improvement studies. In the area of workload data, we found a substantial problem with inaccurate data and a lack of management controls to ensure the accuracy of data inputs. In addition, we found that the Navy was not enforcing its policy and instructions regarding the use of SHORSTAMPS and that, as a result, little use has been made of standards which have been approved for Navy-wide use to manage available personnel or to justify budgets.

#### SHORSTAMPS BACKGROUND

Before 1964, as we noted in our 1980 report on SHORSTAMPS, the Navy had difficulty justifying its manpower budget requests to the Congress. Since the Navy based its manpower requests largely on officials' experience, judgment, and assumptions rather than on credible work measurement/projection techniques, its budget requests were often cut because the Navy could not adequately demonstrate the reasonableness of its estimates.

Since 1964, the Navy has used various formal programs to determine manpower requirements for its shore establishments. Initial programs--the Navy Manpower Validation Program (1964-1968) and the Navy Manpower Survey Program (1969-1973)--had a number of flaws which led to their discontinuance. One flaw was

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<sup>5</sup>The Navy's Shore Requirements, Standards, and Manpower Planning System (SHORSTAMPS)--Does the Navy Really Want It? (GAO/FPCD-80-29, Feb. 7, 1980).

that these programs revealed only temporary manpower needs; as missions and functions changed, these needs quickly became obsolete. Moreover, these programs lacked the versatility to adjust manpower needs to variations in the kind and amount of work to be done. In addition, these programs determined requirements based primarily on interviews and historical data rather than on more rigorous and reliable work measurement techniques.

In 1972, the Navy developed the framework for SHORSTAMPS in an effort to overcome the problems of the earlier systems and to satisfy congressional concerns about the credibility of shore manpower requests. In 1976, the Navy officially adopted the program as its system for determining shore manpower requirements.

The SHORSTAMPS program calls for the use of work measurement techniques to determine total shore manpower requirements--for military and civilian personnel and for contractors--according to mission and function. Its objectives are to

- determine, document, and maintain quantitative and qualitative manpower requirements necessary to perform Navy support missions ashore;
- report manpower requirements having a high degree of credibility;
- redistribute manpower authorizations to match documented tasking and workload; and
- provide a manpower management capability to assist major users of personnel in the planning and programming processes.

SHORSTAMPS standards, when coupled with appropriately validated workload tasking, are intended to be the definitive Navy statement of the manpower required to accomplish that workload. A 1980 memo from the Chief of Naval Operations (CNO) states that

what is intended is that the SHORSTAMPS requirement serve as a tool to assist management to reallocate scarce manpower to the areas of greatest need, to justify proposed increases in manpower needed to accomplish programmed workload, and to permit the development of specific workload impact if the required manpower is not available.

SHORSTAMPS is composed of two main subsystems: the Shore Required Operational Capability (SHOROC) and the staffing standards subsystem. SHOROC is a dictionary of standardized statements which identify the kind and amount of various tasks that can be performed at individual Navy shore establishments. The staffing standards subsystem consists of mathematical algorithms which relate manpower requirements to various levels of workload. Integrating the two subsystems is the Navy Manpower

Requirements System (NMRS), a data-processing capability that determines minimum manpower requirements. An example of the use of staffing standards to determine manpower requirements appears in appendix II, and a detailed description of the SHORSTAMPS program appears in appendix III.

#### STAFFING STANDARDS PROVIDE LIMITED COVERAGE

Approximately 600,000 military and civilian personnel are assigned to Navy's shore establishments. After about 10 years of effort to August 1983, the Navy had developed and promulgated 95 standards reports<sup>6</sup> giving coverage under staffing standards to only about 217,500 (37 percent) of the shore establishment workforce. "Coverage under staffing standards" means that a standard has been developed, that it has been applied against a given workload to determine the number and kind of workforce needed to do the work, and that its output has been included in the manpower budget. (DOD now reports that they currently have 117 standards covering 229,000 spaces ashore.)

Although the Navy has made some progress toward developing and approving standards for work done in the shore establishment since our 1980 review, the majority of Navy shore-based manpower was still not covered by SHORSTAMPS staffing standards as of December 1983. The slow progress being made has hindered the Navy's ability to manage its available shore resources effectively and to credibly justify its staffing needs as Congress has directed. Possible contributors to the slow rate of progress include erratic program budgeting, poor and unusable contractor products related to standards development, and limited emphasis on trained SHORSTAMPS analysts.

#### Erratic SHORSTAMPS program budgeting may have contributed to delayed progress

Funding stability is critical to better management--whether public or private. With funding stability, managers can set more realistic goals and objectives, attain goals and objectives more readily, measure performance more realistically, and place greater confidence on identified causes of variances from desired performance, thereby having a more appropriate basis for taking corrective actions.

Historically, funding has been one of the critical problems besetting the development and implementation of the SHORSTAMPS program. In our 1980 report of the SHORSTAMPS program, we noted that top Navy officials were informed early that the SHORSTAMPS effort would require more funds to develop the system within an

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<sup>6</sup>A standards report may cover one or more standard equations or algorithms for tasks that are reasonably alike.

acceptable time frame. Erratic SHORSTAMPS program budgeting, however, continues to exist. The table which follows shows the fluctuations in funding levels planned for SHORSTAMPS for fiscal years 1979 through 1989 at various points between September 1979 and May 1983.

SHORSTAMPS Budget Projections for Past Year, Current Year, and Five Out-Years

Date of Projection	Fiscal Year										
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
	(millions)										
Sept. 1979	\$7.4	\$8.8	\$14.1	\$15.2	\$23.3	\$19.3	\$20.8				
Sept. 1980		10.0	14.6	17.4	24.3	19.6	21.3	\$19.7			
Sept. 1981			12.7	16.9	23.4	18.8	21.3	19.7	\$19.9		
May 1982				13.7	12.5	12.0	14.2	12.3	12.2	\$12.3	
Sept. 1982					12.5	22.8	20.2	18.7	18.8	18.8	\$18.8
Feb. 1983					18.1	22.8	20.2	18.7	18.8	18.8	18.8
Apr. 1983					15.7	14.1	16.2	14.7	16.1	24.2	24.6
May 1983					15.7	14.1	12.1	10.7	10.2	3.7	3.0

One side effect of fluctuations in funding is increased reliance upon contractors because contract efforts are more easily expanded and reduced than civilian and military personnel levels. Funding cuts, however, can have serious effects on standards development because contractor start-ups and phase-outs cause lost effort and reduced capability and are likely to have contributed to the poor quality of standards received from contractors (see below).

The effects of erratic funding can be seen in the following example. The Navy reduced its SHORSTAMPS budget by \$14.3 million in fiscal years 1983 and 1984, of which \$11.2 million (or \$5.6 million annually) was for contract assistance including standards-development work. Although the \$5.6 million cut for fiscal year 1983 was eventually reinstated by the House Committee on Appropriations, the restoration came so late in the fiscal year that the Navy could use only about \$3.3 million for SHORSTAMPS-related work. Of this amount, only \$1.8 million could then be used for standards-development work.

Many contractor products  
are poor and unusable

During fiscal years 1979-82, the Navy SHORSTAMPS program expended over \$4.5 million for 43 contractor products related to standards development. Of these products, 7 (16 percent) were considered usable, 20 (47 percent) partially usable, and 16 (37 percent)--costing \$2.5 million--unusable. Examples of problems associated with poor products included (1) back-up data lost or untraceable, (2) universe poorly or improperly identified, and (3) inadequate workload definition for measurement.

SHORSTAMPS officials at CNO headquarters and at the two manpower analysis centers emphasized that, although they received some usable contractor products, they did not favor using contractors to develop staffing standards because of the problems with the quality of the contractors' products.

That problems are associated with using contractors for the development of staffing standards is not new. In its September 1979 report to the House Committee on Armed Services, the Navy pointed out that using contractor personnel was excessively costly and had not produced desired results. Furthermore, in March 1981, the Navy also reported other problems with contractors, including their

- lack of knowledge about Navy organizations, functions, and management practices, which significantly hindered their ability to develop standards in any functional area;
- recruiting difficulties which sometimes required 6 to 8 months after contract award date to reach the necessary staffing level; and
- requirements for SHORSTAMPS staff on about a one-to-one ratio to monitor contract efforts and exchange information pertinent to standards development.

In our February 1980 report, we pointed out that the Air Force, with its years of staffing-standards experience, argues against contracting for standards development. It believes that contracting does not offer the continuity and expertise provided by an in-house work force of military and civilian management engineers.

Limited emphasis on managing  
and retaining trained  
SHORSTAMPS analysts is costly  
and may hamper development

In 1980, we recommended that the Secretary of Defense require the Navy to establish manpower and personnel management career fields for both civilians and military personnel. Such

career fields would enhance institutional expertise and facilitate accountability for implementing staffing standards. The Navy has not implemented this recommendation and has done little to emphasize management and retention of SHORSTAMPS-trained analysts.

With respect to civilians, the Navy implemented a Civilian Career Program in December 1981. This program defined objectives, established a career board and functional advisory panel, listed mission and function statements, and identified the need for an intern development center. However, as of February 1984, the Navy had not approved resources for the development center, which was to be a key means of bringing new people into the manpower area.

As for military personnel, the Navy decided to use its Officer Subspecialty and Navy Enlisted Classification systems to provide SHORSTAMPS with the majority of its standards-development and manpower-management personnel, rather than to establish a career field like that of the Air Force, as the Congress suggested and as we recommended in a 1979 report<sup>7</sup> and again in the previously cited 1980 report. Congressional interest in the Navy's establishing a career field in manpower appears in the April 1977 House report on fiscal year 1978 defense appropriations, where it was stated that "the Navy would benefit by creating a definite career pattern for personnel to pursue in the manpower area which would of itself be career enhancing."

The Navy believes, however, that its subspecialty classification for officer personnel is a viable means of tracking and utilizing expertise in the manpower area. Most officers have both a primary specialty, such as submarine or surface warfare, and one or more subspecialties, such as personnel or intelligence. The Navy makes an effort to assign officers to shore duty into positions requiring their subspecialties.

While the Navy believes that its approach accomplishes its objectives, the evidence indicates that the Navy is not actively managing the officer manpower subspecialty to capitalize on second tours, and that it has not developed any formal guidance requiring such management to occur. Of the 22 officers assigned to the SHORSTAMPS departments of the Manpower and Material Analysis Centers at the time of our review, only 3 had the manpower subspecialty; 3 were designated as students working toward achieving the manpower subspecialty; and 10 had no subspecialty. Of the remaining 6 officers, 4 had subspecialties in other fields (computer science, professional health care administration, education and training management, and human resource management);

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<sup>7</sup>Military and Civilian Managers of Defense Manpower: Improvements Possible in Their Experience, Training, and Rewards, Vol. I (GAO/FPCD-79-1, Feb. 16, 1979).

and 2 had master's degrees in fields outside of Navy subspecialties (business administration and library science).

Likewise, the Navy has not established a system to manage its enlisted manpower classifications. As with officers, the same basic utilization trend existed with enlisted manpower classifications. Only 53, or 25 percent, of the 210 enlisted personnel assigned to the SHORSTAMPS departments had the Management Engineering Technician classification. The remaining people had classifications designating various other areas of expertise.

In our February 1980 report, we pointed out that the Navy makes a considerable investment in training analysts to develop SHORSTAMPS standards, but that it had not yet taken steps to protect and capitalize on its investment. The Navy continues to invest heavily in training military personnel who routinely transfer, and it has still not established a formal system to manage this expertise. The training expense is especially significant since 70 percent of SHORSTAMPS personnel are military and their average tour length is 3 years. During the approximate 4-year period, October 1979 through July 1983, the SHORSTAMPS departments at the Atlantic and Pacific Centers acquired a total of 429 new analysts to train--43 officers, 337 enlisted personnel, and 49 civilians--and lost a total of 317 trained and experienced analysts--35 officers, 235 enlisted personnel, and 47 civilians.

During this same 4-year period, a total of only 12 enlisted personnel and one officer had served or were serving subsequent tours. According to analysis center officials, 9 of the 12 enlisted individuals were serving second tours as the result of individual requests, in-house trade arrangements, and other internal decisions; they were not the result of the Navy's detailing system. Information on the remaining three enlisted personnel was unknown. The only officer serving a second tour resulted from a personal request. Also, 67 percent of the enlisted personnel assigned to the analysis centers were in the senior grades E-7 through E-9. Their seniority makes it less likely that they will serve second tours in the manpower area and may delay institutionalizing manpower management in the Navy since the continuity needed to manage the manpower program efficiently and effectively may not be achieved.

THE LACK OF METHOD STUDIES IN THE  
STANDARDS-DEVELOPMENT PROCESS  
MAY PERPETUATE INEFFICIENCIES

Method studies involve examinations of actual work processes and work flows in order to identify work or methods which may be non-essential, duplicative, or otherwise inefficient. Without

such studies, historical inefficiencies may be incorporated into the standards which are developed. Consequently, use of these standards may produce overstated manpower requirements.

Methods-improvement studies continue to be missing from the Navy's process for developing SHORSTAMPS staffing standards. As we reported in 1980, the Navy recognized the importance of incorporating method studies into the standards-development process, but had not done so for two reasons. First, the Navy decided to wait until the standards-revision phase to perform these studies and to concentrate its limited resources on standards development. Second, the Navy wanted to cover quickly as much of the shore workforce as possible, and incorporating method studies would have delayed this effort.

Our current review found that, although many standards were either being reviewed for currency or were scheduled for review through fiscal year 1984, method studies were still not being performed. Again, officials emphasized the Navy's need to cover the population first as the reason why method studies were not being done. The Navy now plans for its recently reorganized manpower program, the Navy Management Engineering Program (NAVMEP), to incorporate the performance of efficiency reviews, another term for methods-improvement studies. (See ch. 3.)

#### SHOROC SUBSYSTEM DATA IS INACCURATE

The Navy has rectified some of the SHOROC subsystem problems we noted in our prior report by identifying the shore activities to be covered by SHORSTAMPS, training users in SHOROC preparation, providing feedback reports so that submitted values can be verified, and updating workload projections only for those functions covered by standards. However, problems still exist with the accuracy of SHOROC workload projections, the clarity of SHOROC definitions, and the accuracy of Billet Occupation Classification (BOC) codes.

#### Controls lacking to ensure the accuracy of workload projections

SHOROC reports from individual activities contain workload projections for current and future years. These projections are called parameter values, and they are required to be reviewed at least annually where standards exist and to be updated when changes occur and prior to the annual budget submission. These values must be accurate because they provide the basis for developing standards and, ultimately, for determining the minimum manpower required to perform specific functions.

However, none of the major manpower commands we visited was ensuring that the SHOROC parameter values submitted by activities were accurate. Although the commands make some checks of the

parameter values for reasonableness, command officials told us that they make no checks for accuracy. We found that the activity department managers, who are called upon to report SHOROC values, generally lacked knowledge about SHORSTAMPS and about the importance of submitting accurate SHOROC values.

We tested the accuracy of SHOROC data at 23 activities by reviewing the 121 Required Functional Capabilities (RFCs)<sup>8</sup> and 654 parameters which applied to these activities for fiscal year 1983 and future years. We were able to obtain data on 389 parameter values: 202 (52 percent) of these were accurate, and 187 (48 percent) were inaccurate. We were unable to validate 265 values (40 percent) because supporting documentation was not available or reconstructable or because values were based on estimates or guesses.

At present, there is no requirement that records be maintained to support reported SHOROC values, and an audit trail does not always exist to check these inputs. Because of this absence of records, 40 percent of the parameters we attempted to examine have no documented historical basis for analytical study, trend analysis, or reassessment of the accuracy of previous inputs.

The 187 inaccurately reported values included both overstatements and understatements to the value that should have been reported. Reasons for the inaccuracies included the use of an incorrect source of data or calculation method, estimates or guesses of what the values should be (especially for future years), uncertainty about what to report because of insufficient SHOROC knowledge or unclear SHOROC definitions, and hesitancy to reduce values in the belief that changes were insignificant or out of fear that manpower authorizations would be lost. Often, officials did not know the reasons for the inaccuracies.

The results of our parameter value test are shown below, and they strongly indicate that a problem exists with parameter value accuracy. In addition, although 202 values were accurate, 76 of these involved a simple "yes" or "no" response to a definition question (e.g., "Does the activity provide a 24-hour-per-day dispatcher?").

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<sup>8</sup>Required Functional Capabilities are the specific tasks performed within a functional area, such as operating an enlisted dining facility or issuing recruit clothing.

Number of SHOROC Parameter Values

	<u>Reviewed</u>	<u>Audit trail available for validation</u>	<u>Accurate</u>	<u>Inaccurate</u>
FY 1983	297	234	112 (48%)	122 (52%)
Future years	<u>357</u>	<u>155</u>	<u>90 (58%)</u>	<u>65 (42%)</u>
Total	<u>654</u>	<u>389</u>	<u>202 (52%)</u>	<u>187 (48%)</u>

Inaccurately reported parameter values can affect the accuracy of manpower requirements. We determined the impact the erroneous parameter values had on manpower requirements in the 57 RFCs for which we had verified errors in the parameter value data by using the Navy Manpower Requirements System (NMRS). Of the 57 RFCs, 16 were overstated by a total of 82 positions; 19 were understated by a total of 154 positions; and 22 had no effect on manpower requirements. The following table shows the impact on manpower requirements of some of the RFC parameter values we found to be in error.

Effect of Inaccurate Parameter Values on Manpower Requirements

<u>RFC and short title</u>	<u>Location</u>	<u>Parameter</u>	<u>Requirements based upon</u>				<u>Difference from reported value</u>
			<u>Navy reported value</u>	<u>GAO validated value</u>	<u>Navy reported value</u>	<u>GAO validated value</u>	
<u>SUP 04.012</u> Enlisted dining facility	Norfolk Naval Shipyard	(a)	26,000	20,130	105	77	28 over
		(b)	35	21			
<u>MED 26.001</u> Pharmacy	Portsmouth Naval Reg. Med. Center	(c)	535	535	50	51	1 under
		(d)	36,661	37,234			
<u>SUP 04.006</u> SERVMART	Naval Supply Center, Norfolk	(e)	72,552	73,659	31	30	1 over
		(f)	2,740	2,664			
<u>PSO 00.002</u> Harbor pilots	Naval Station, Norfolk	(g)	442	274	8	5	3 over
		(h)	1.6	1.1			
		(i)	10	10			
<u>FIR 01.001</u> Fire prevention inspections	Naval Air Test Center	(j)	4,731,839	4,095,667	4	4	no change
<u>MED 23.001</u> Provide nursing services	San Diego Naval Reg. Med. Center	(k)	614	614	735	741	6 under
		(l)	468	491			
		(m)	767	768			

Parameter definitions

- (a) Monthly rations fed.
- (b) Serving lines operated per week.
- (c) Number of operating beds.
- (d) Monthly average number of outpatient and inpatient visits for a 12-month period.
- (e) Average number of line items issued per month based on previous 12 months.
- (f) Average number of customers serviced per month.
- (g) Average monthly number of watercraft movements requiring the assistance of one or more harbor pilots.
- (h) Average duration of a harbor pilot's mission based upon 12-month average of all time expended from the time of dispatch of the harbor pilot until his return.
- (i) Total number of YTM and YTB tugboats operated by port service operations.
- (j) Square feet of floor space in thousands.
- (k) Number of operating beds.
- (l) Staff personnel supported.
- (m) Average number of surgical cases operated per month in surgical suite.

In February 1983, the Naval Audit Service (NAS) identified similar problems with parameter values at several activities.<sup>9</sup> NAS noted that verification of parameter values and reviews of supporting documentation were incomplete; that values were not always reported or, when reported, occasionally were in error; and that documentation supporting reported values was not always available or sufficient.

Unclear parameter definitions may lead to inaccurate data reporting

The SHOROC subsystem still does not always provide clear definitions of parameter values which activities are to report as their various workload factors. To be effective, SHOROC parameter definitions should clearly define the information to be included in the reported value, the specific time period values are to be based on, and the way in which the values should be calculated. Ambiguous definitions have caused misunderstanding among activities regarding the specific values to be reported and thereby add to the problem of data inaccuracy. Since these parameter values are used to compute staffing requirements, values that can fluctuate depending on interpretation cannot ensure accurate manpower requirements.

In July 1982, NAS addressed the Navy's need to clarify parameter definitions.<sup>10</sup> NAS reviewed 31 RFCs at one naval station for which standards had been developed and found that 36 of the 37 parameters relating to these RFCs were ambiguous. The definitions did not specify one or more of the following essential factors for determining the workload to report: the cut-off date, the reporting period, or a clear identification of the work unit. NAS recommended that the SHOROC dictionary be revised to define parameter values clearly. Our analysis showed that ambiguous definitions continue to contribute to inaccurate data reporting.

Billet Occupation Classification (BOC) codes need to be accurate

Many Navy shore authorizations have inaccurate BOC codes assigned to them. BOC codes are three-position codes used to link manpower authorizations to RFCs in the shore establishment. The accuracy of these codes is critical to Navy manpower management. BOC codes are the only common data element available to compare, in an automated manner, the SHORSTAMPS-generated

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<sup>9</sup>Summary Report on Accuracy of Shore Required Operational Capabilities (SHOROC) Data Reporting, Auditor General of the Navy (Report H0063, Feb. 17, 1983).

<sup>10</sup>Naval Audit Service (Audit Report A10352L, July 7, 1982).

manpower requirements of a given RFC with the current military and civilian authorizations in that function in order to determine if excesses or deficits exist in the workforce.

BOC codes also provide high-level manpower managers various query capabilities and critical information necessary to develop, apply, assess, and implement SHORSTAMPS staffing standards. Existing problems associated with BOC codes hamper effective and accurate implementation of SHORSTAMPS standards. These problems include

- activities misassigning or assigning "undetermined" BOC codes to authorizations because of uncertainty about what code to assign;
- major commands and activities not always ensuring that BOC codes are accurately assigned and errors corrected;
- erroneous inputs remaining in the data bases until major commands submit corrections because the BOC accuracy edit check does not affect existing BOC errors in the data bases;
- BOC codes for civilian authorizations being required to be updated only once a year; and
- the NMRS using authorization data which is not current since it is only updated quarterly.

Analysis of trend data concerning BOC code inaccuracies shows that, although the Navy has made progress toward reducing the problem, it needs to continue its effort.

APPROVED STANDARDS ARE  
NOT USED AS INTENDED

SHORSTAMPS has not been used or accepted Navy-wide as the Navy's official program for managing shore manpower and determining requirements. Few commands have used the 72 standards reports that the CNO approved for use by early FY 1983 as the Navy intended. Also, the Navy is neither monitoring nor enforcing the use of standards and operational impediments, and command resistance limits the program's use and effectiveness.

Minimal use made of  
SHORSTAMPS standards

By October 1982, 72 SHORSTAMPS standards reports covering 200,000 shore authorizations were approved for use. However, these standards have been used only minimally to manage manpower and to determine staffing requirements. In fact, four of the five commands we visited were not using the SHORSTAMPS standards in accordance with the CNO-approved instruction for SHORSTAMPS

implementation. The Commander-in-Chief, U.S. Atlantic Fleet (CINCLANTFLT), is the one command generally implementing SHORSTAMPS in accordance with the program's directives. (It is interesting to note that a key official in CINCLANTFLT's manpower planning and analysis section had former service in the manpower area, while his counterparts in the other commands were generally serving in their first manpower job.)

The SHORSTAMPS instruction requires that, upon receipt of a promulgated standard, commands reprogram authorizations and resources to the maximum extent practicable to conform with requirements generated by SHORSTAMPS standards. To fill any shortages that cannot be addressed through reprogramming, commands can request increases in authorizations through the budget process. Such requests are to be accompanied by SHORSTAMPS justification. Thereafter, standards are to be reapplied annually before July in preparation for each budget cycle. Commands are to maintain local records to support the initial application, implementation, and periodic reapplication of standards.

Most commands we visited in the summer of 1983 were not complying with this instruction, believing that they could choose which standards they wanted to implement and when. Also, they generally did not maintain information quantifying the use of standards. At the time of our visits, the extent of SHORSTAMPS use for standards promulgated as of October 1982 varied among commands, as shown in the following table.

Magnitude of Command Use of SHORSTAMPS

	<u>Number of standards reports applicable</u>	<u>GAO-verified number of standards reports implemented</u>	<u>GAO-verified number of authorizations reprogrammed as a result of SHORSTAMPS</u>	<u>GAO-verified number of SHORSTAMPS-justified authorizations requested in budget process</u>
Commander-in-Chief, U.S. Atlantic Fleet	67	a/ 58	739	b/ 1,396
Commander-in-Chief, U.S. Pacific Fleet	56	c/ 3	479	d/ 1,394
Chief of Naval Material	58	e/ -	23	e/
Chief of Naval Education and Training	54	f/ 10	83	g/
Naval Medical Command	43	h/ 1	0	0

a/Nine standards reports were not implemented because they were being revised.

b/Number was verified for 1984 program year only. Data for 1985 program year was not readily available.

c/Local implementation for 30 standards reports was initiated but halted by CINCPACFLT; 21 were nonconcurrent with; 1 was going to be implemented; and the status of 1 was unknown.

d/Number represents 1984 and 1985 program year requests. It includes authorizations relative to the 30 standards reports for which local implementation was halted.

e/Command had no information available identifying these totals. We were told that as a rule SHORSTAMPS standards were not used to determine manpower in CNM and used only on a limited basis for reprogramming manpower.

f/Command reported 27 standards reports as "no reprogramming possible--use in the budget process" although no documentation was provided; 10 were forwarded to manpower departments for action although no action had yet been taken; 2 were disagreed with; the status of 5 remained undetermined.

g/Data was not available.

h/This was a directed requirement. The remaining standards reports were not implemented because the basic philosophy of the Bureau of Medicine and Surgery, now the Naval Medical Command, was to wait until all standards had been developed. The command feared that standards implementation would take away personnel, and believed that a need existed to improve standards and the command's internal data reporting system.

Even when standards are used, they are not always used in accordance with CNO instructions. Examples of these deviations include

- not reprogramming civilian authorizations according to requirements derived from SHORSTAMPS standards;
- not considering all available manpower (including contractor, temporary, and transient personnel) when determining staffing adequacy; and
- not comparing all activities and manpower to determine if excesses existed before requesting more.

Civilian authorizations  
are not being reprogrammed

Civilian populations offer a particular difficulty for the application of SHORSTAMPS. Major command and other Navy officials told us that civilians cannot be reprogrammed under SHORSTAMPS because they are managed in aggregate, relate to specific programs in the budget, and are especially difficult and costly to move. Consequently, few civilian reprogrammings have occurred. Not applying SHORSTAMPS to civilians can substantially impair the impact of the program since civilians account for about 50 percent of the shore workforce.

CINCLANTFLT has found a way around the barriers to applying SHORSTAMPS standards to its civilians. We were told that this command manages civilians in the aggregate at each of its activities as do other commands. However, when the command implements a standard that affects civilian manpower, it identifies unfilled requirements and surplus authorizations by position on the authorization document for civilian manpower. The command expects this information to be used by subordinates as a tool to reallocate civilian resources in line with the SHORSTAMPS requirements. It encourages the application of excesses to deficits in functions already covered by standards. The command requests feedback on actions taken or planned, and monitors the status of these actions. If civilian excesses are applied inappropriately, CINCLANTFLT reduces activity requests for additional manpower. For example, in its 1985 budget submission, CINCLANTFLT reduced its request for civilian manpower by 100 authorizations by applying civilian excesses to the requested amount justified by SHORSTAMPS.

In contrast, SHORSTAMPS standards have been little used to manage civilian authorizations by the Chief of Naval Material; the Chief of Naval Education and Training; the Commander-in-Chief, U.S. Pacific Fleet; and the Naval Medical Command.

Not all available manpower alternatives  
are being considered

The SHORSTAMPS program is intended to cover all available manpower--including contractor, transient, temporary additional duty, selected reserves, and other services. However, these resources are generally not being accounted for in determining the actual manpower required to perform applicable functions, according to SHORSTAMPS officials and a September 1982 study conducted by a contractor.<sup>11</sup> As of September 1983, the Navy had not developed a data base to account for these types of manpower resources. One official informed us that he hoped to incorporate this type manpower into the Navy's data base within 2 to 3 years.

SHORSTAMPS officials informed us that CINCLANTFLT was the only major manpower user which had actually determined its manpower requirements within the true spirit of the SHORSTAMPS program--total force manpower requirements.

Incorporating all available manpower can impact substantially on the actual manpower required to perform specific functions and, consequently, on the credibility of budget submissions. For example, in the 1984 budget submission for 29 activities providing food services for CINCLANTFLT, the SHORSTAMPS manpower requirement was 1,738 and the command's authorizations were 883, resulting in an apparent shortfall of 855. However, 824 staff years of other manpower--653 contractor, 167 temporary, 4 transient--were available to perform this function so the true shortfall became 31 requirements instead of 855.

The Chief of Naval Education and Training did not implement standards on a command-wide basis, but instead reviewed the staffing impact on its civilian community separately from that on its military population. Thus, to the extent that civilians and military personnel perform similar functions, the actual manpower needed would not necessarily be accurate. Further, this command was allowing its activities to request manpower via the budget process justified by SHORSTAMPS without doing a command-wide comparison to determine if any excesses could be reprogrammed from another of its activities.

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<sup>11</sup>Total Force Manpower Authorizations, report prepared for Deputy Chief of Naval Operations (Manpower, Personnel, and Training) by Tidewater Consultants, Inc. (Sept. 1982).

Standards are not being  
reapplied annually

Few commands we visited were annually reapplying the standards before the budget cycle began. Only CINCLANTFLT was doing this to some extent and using a computer to aid in the process. Other commands cited the following reasons for not reapplying any standards:

- They did not know that reapplication of standards was required.
- Few standards had been implemented.
- They believed it to be too extensive a pencil exercise without computer aid.

Commands perceive impediments  
to use of standards

The commands we visited cited a variety of reasons for not using SHORSTAMPS standards. These included perceptions that

- some standards were inaccurate;
- automated capability was needed to relate SHORSTAMPS requirements to authorizations; and
- little incentive to use SHORSTAMPS exists because using standards was not an essential element of budget success.

With regard to the first reason, command officials believed some promulgated standards to be inaccurate. Although commands have the opportunity to voice their concerns about the accuracy of standards before they are promulgated by the CNO, several officials believed that their concerns were sometimes disregarded and not incorporated into the standard since restudying a functional area would slow the progress of standards development and increase the likelihood of not meeting the 1987 target date for having 70 percent of the shore population under standards. This perceived inaccuracy of some of the standards made some commanders hesitant to use them.

Second, a number of Navy officials told us that managers need automated capability to relate SHORSTAMPS-generated requirements to authorizations. Not having this capability makes them hesitant to use the SHORSTAMPS system. They felt that, without this capability, they could not access the data bases to make timely, meaningful comparisons, nor could they update those data bases promptly as changes in authorizations and needs occurred.

The Navy has recognized the need to provide some automated capability to the commands and is developing an automated data processing system, the Manpower Claimant Access Support System (MANCLASS). MANCLASS is expected to replace many of the tedious tasks now done manually and to provide commands with the capability to enter input and receive output of manpower authorization and requirement data. MANCLASS is slated to begin functioning in the fall of 1986.

The data bases themselves, however, may also have impeded the effective use of SHORSTAMPS. The data on military and civilian positions is contained in separate files of the Navy Manpower Data Accounting System (NMDAS), the major data base used to manage manpower. We were told that, although the military files were updated on an ongoing basis, the civilian files were required to be updated only once a year, in preparation for the budget. Since changes to civilian positions occurred daily, the civilian data base, with its single update, was current only once a year. Moreover, that update was performed over an extended time period, which further compromised its currency. Consequently, the civilian files could have introduced inaccuracies in the management of manpower, making any trade-off decisions based on a comparison of requirements to the civilian data base questionable.

Third, commands believe that little incentive exists for using standards because SHORSTAMPS justification is not a necessary budget requisite for the authorization of manpower resources, and it plays no significant role in justifying and funding manpower. Commands were disenchanted with SHORSTAMPS because, although much effort was expended on the program, comparison of authorizations to requirements served only to identify deficits which would not necessarily be supported in the budget process.

Guidance for SHORSTAMPS implementation states that SHORSTAMPS-justified requirements still must compete with other manpower requirements which the standards may not support. We were told that the CNO was encouraging its budget planners to use SHORSTAMPS because the program would add credibility to its budget. However, CNO officials stated that CNO guidance authorizes manpower according to Navy operational mission priorities. Because shore manpower needs are of a support nature, these needs will not always reach the necessary priority for funding. Generally, while officials believed that SHORSTAMPS justification adds additional credibility to manpower requirements, they indicated that it would not necessarily increase their level of priority.

Some CNO officials expressed the view that SHORSTAMPS had more utility in justifying existing positions than in supporting additional positions and believed that SHORSTAMPS has not been very successful in justifying additional positions ashore. The Navy's dissatisfaction with the ability of SHORSTAMPS to support manpower growth ashore was a contributing factor in the establishment of NAVMEP (see ch. 3). The extent of the success of SHORSTAMPS in justifying growth, however, is actually unknown because the Navy has no tracking system to identify the number of shore positions funded based upon SHORSTAMPS standards.

Another application problem results from the current incompatibility of SHORSTAMPS with the budget process. SHORSTAMPS covers functions while the budget is developed along program lines. The incompatibility stems from the fact that a given function, such as supply, is likely to apply to multiple programs, such as sealift or air-sea rescue, and a given program would require the performance of numerous functions. What is needed is a way of aggregating and translating functional requirements into program requirements and vice versa.

#### Monitoring and enforcement of SHORSTAMPS are missing

Correction of the problems described above will not necessarily result in more use of SHORSTAMPS standards. The reason for this is the absence of strong monitoring and enforcement efforts.

According to SHORSTAMPS and major command officials, no Navy office is monitoring the use of staffing standards to ensure that approved or promulgated standards are actually being used as intended. Also, enforcement is not occurring, and officials emphasized that no office within the CNO organization has been delegated the necessary authority to compel commands to use SHORSTAMPS standards to reprogram resources or to determine shore manpower requirements. Consequently, no action has been taken against commands which have not implemented the applicable standards. For example, the Chief of Naval Material is the largest manpower command, with about 221,000 authorizations--37 percent of the entire shore population. Yet, though 58 standards which applied to its functions have been approved by the CNO, this command continued to manage manpower and determine requirements largely as it did before SHORSTAMPS.

Lack of enforcement may contribute to lax command attitudes regarding the use and consequent limited implementation of standards. For example, several major commands did not believe that CNO-approved SHORSTAMPS standards were required to be implemented or used to manage manpower and to determine requirements. Some officials interpreted the phrase "to the maximum extent practicable" contained in the SHORSTAMPS implementation and promulgation guidance to mean that commands have the flexibility to

implement only those standards they desire. SHORSTAMPS management officials, however, told us that the phrase was not intended to allow such choice, but rather to emphasize that applicable standards were to be used to the maximum extent practicable in managing existing resources (reprogramming) and in justifying additional resources via the budgetary process. Not compelling commands to use SHORSTAMPS standards, however, reinforces such misperceptions, and the selective use and lack of enforcement has diluted SHORSTAMPS' reputation as the Navy's official manpower planning system for shore-based activities.

AGENCY COMMENTS  
AND OUR EVALUATION

DOD generally concurred with the findings and conclusions concerning the SHORSTAMPS program. With regard to the issue of standards coverage, DOD stated that, since we completed our field work, additional progress has been made. It reported that, as of September 1984, it has promulgated 117 standards reports applying to 229,000 (46 percent) of the shore establishment--an increase of 11,500 (9 percentage points). DOD generally agreed that progress toward developing and approving standards has been hampered by erratic program budgeting, poor contractor products, and difficulties in retaining trained analysts.

DOD did not concur with the finding that its personnel in the manpower field were not being effectively retained in the manpower field. Although it did not dispute our findings with regard to the scarcity of second tours in the manpower field among the staff of the Navy Manpower and Material Analysis Centers (NAVMMAC), it provided several examples of cases where previous manpower field experience was reutilized after an intervening operational assignment. DOD also indicated that the amount of retouring in the manpower field which is possible is limited by the fact that many of the personnel serving in manpower jobs have warfare designators or primary skills which are in demand in the fleet.

We believe that DOD's response to this finding reinforces our conclusion that the Navy could benefit from the establishment of a manpower career field for military personnel. Staffing the manpower area with personnel whose manpower designator is either a subspecialty or a secondary skill requires the Navy to pull these people out of operational units where their skills may be in high demand. Establishment of a manpower career field could, therefore, free up personnel possessing critical skills to continue to work in their primary field. Also, it would allow people in the manpower area to develop greater professionalism through routine retouring and providing career incentives.

DOD concurred with the need to conduct methods-improvement studies. It stated that the Shore Manpower Documents (SHMD) program, which has succeeded SHORSTAMPS, will integrate efficiency reviews (methods-improvement studies) into the standards-

development process. These reviews will include critically scrutinizing manpower and material resources and existing procedures and organizational structures in order to promote efficiencies and effectiveness and to incorporate those efficiencies into staffing standards so that manpower requirements are based on the most efficient organization achievable.

DOD also concurred with the finding that serious data problems exist in the SHOROC subsystem. In response, it indicated that it plans to implement a Manpower Assessment Team, which will analyze all SHOROC and SHOROC-related data on a continual basis and initiate corrective action where necessary. The team will analyze parameter-definition problems and trace them to the source of misinterpretation, and will also study reported SHOROC parameter values, identifying those values that require further substantiation. Questionable SHOROC parameters will be referred to Resource Sponsors and/or Functional Sponsors for reconciliation. The team will verify all BOC assignments for funded military and civilian authorizations, as well as quantify man-year equivalents for all other manpower resources--reserves, contractors, temporary additional duty personnel, and transients.

DOD also concurred with our finding that SHORSTAMPS standards were not being used as intended. DOD acknowledged that, in the past, standards had not been used to the fullest in manpower management and that deficiencies existed in monitoring and enforcing the use of the standards. Under SHMD, the Navy intends to implement the requisite management control mechanisms to ensure execution monitoring and concomitant enforcement and to revise applicable Navy regulations to incorporate these mechanisms.

DOD also agreed that the lack of an automated capability to analyze and track manpower requirements and authorizations has contributed to the lack of use of SHORSTAMPS standards in the budget process. DOD stated that the Navy has budgeted for the needed automated system beginning in fiscal year 1986. This system, called the Total Force Manpower Management System (TFMMS), will provide the SHMD program with an automated, integrated capability to compute and analyze differences between SHMD standard-derived requirements and manpower resources--such as military/civilian authorizations, contractor, transient, temporary additional duty, overtime, and reserve--at the activity, claimant, and sponsor levels. TFMMS, in conjunction with other Navy automated systems, will encompass all data elements for translating functional requirements into manpower program requirements required for Planning, Programming, and Budgeting System (PPBS) processes.

## CHAPTER 3

### WILL THE NAVY'S ALTERNATIVE TO SHORSTAMPS IMPROVE ITS SHORE MANPOWER MANAGEMENT?

Dissatisfied with the progress of SHORSTAMPS, the Navy has approved an alternative, the Shore Manpower Documents (SHMD) program. This new program is incorporated into the Navy Manpower Engineering Program (NAVMEP), along with the manpower-planning systems used for ships, squadrons, and several other manpower-related programs. The Navy expects SHMD to succeed where SHORSTAMPS has not because SHMD is aimed at providing (1) a more centralized organization, (2) methods-improvement studies, and (3) the development of staffing standards at an accelerated rate. By relying on an accelerated standards-development strategy, the Navy plans for NAVMEP to cover all the manpower requirements of the entire Navy within 2 years. Upon reaching that goal, the program is to enter a series of authentication cycles, in which all requirements will be reevaluated on a regular basis.

As presently constituted, NAVMEP seems likely to offer some benefits which the previous systems did not provide. First, consolidating the management of manpower-needs determination may improve coordination among manpower systems. Second, faster development of staffing standards could further acceptance as well as coordination. Third, methods-improvement studies should increase the accuracy of standards and, ultimately, the efficiency of the Navy.

However, several aspects of the NAVMEP plan entail problems which seem likely to preclude or nullify its potential benefits. One problem we see in the staffing-standards area is the planned use of questionable methodologies for the development of standards. Another problem is the stability of the budgeted resources devoted to manpower planning, which could preclude the performance of methods-improvement studies.

#### NAVMEP ORIGINATED AS AN ALTERNATIVE TO SHORSTAMPS

The origin of NAVMEP lies in the Navy's dissatisfaction with SHORSTAMPS. In October 1982, the CNO asked the Deputy Chief for Manpower, Personnel, and Training how many new authorizations had been obtained through the SHORSTAMPS program (which then had achieved 38 percent of full implementation). At that time, the CNO commented that, if the program had not resulted in additional authorizations, the Navy was wasting money on it.

Since so few new authorizations had been obtained, the CNO, in March 1983, recommended to the Secretary of the Navy that SHORSTAMPS be terminated. The Secretary, however, citing congressional insistence upon a system for determining staffing needs, declined to recommend the termination until "a solid

alternative to SHORSTAMPS" was developed. The alternative, NAVMEP, was first outlined in May 1983 in a memorandum to the Deputy Chief for Manpower, Personnel, and Training. By November of that year, the program had been developed and approved by the Vice Chief of Naval Operations. NAVMEP was formally approved by the Secretary of the Navy in December 1983.

#### NAVY EXPECTS NAVMEP TO STREAMLINE DETERMINATION OF STAFFING NEEDS

The consolidation of all the Navy's existing manpower-determination programs under NAVMEP was designed primarily to provide a more realistic determination of the staffing needs of shore-based activities. In particular, by consolidating SHORSTAMPS and two shore-based methods-improvement programs into the SHMD program, the Navy hopes NAVMEP will maximize the use of method studies while reducing duplication and mutual interference. The Navy expects that this consolidation, coupled with NAVMEP's modifications of the standards-development process, will produce reliable manpower requirements with 100-percent coverage in only 2 years.

#### NAVMEP incorporates existing Navy manpower-determination programs

NAVMEP has subsumed five Navy programs for determining staffing needs: the SHMD Program, the successor of SHORSTAMPS; the present SMD and SQMD Programs (to which NAVMEP plans no changes); and two methods-improvement programs--Commercial Activities (CA) and Efficiency Review (ER). The CA program is designed to delete unnecessary functions in shore activities, to organize the remaining functions more efficiently, and to identify those functions which private industry could more economically perform on a contract basis. The ER program is aimed at performing similar studies on those sectors of the shore establishment which are not considered candidates for conversion to contract.

#### NAVMEP modifications of the standards-development process intended to accelerate coverage

NAVMEP plans to accelerate the development of standards by introducing certain modifications to the process. These modifications include

- reducing the time allotted to the various steps of the standards-development process,
- adopting authorizations which have been determined from existing macro-models as valid standards, and

--accepting those authorizations currently in force as valid even though they were not generated or validated by manpower-determination systems.

Moreover, to facilitate the development process, the Navy plans to place its standards-development teams permanently at several geographic locations.

In the interest of accelerating coverage, the Navy has decided to shorten the various phases of the development process. Where the Navy formerly spent 18 to 24 months to develop and validate a manpower standard, it now plans to spend only 8 to 13 months.

Under NAVMEP, development of staffing standards will be not only shorter but broader, supplementing SHMDs with the results of Chief of Naval Material (CNM) macro-models. These models compute manpower requirements based on aggregate measures of workload (e.g., the number of overhauls planned for a shipyard). Where suitable, NAVMEP will adopt as valid any authorizations that these macro-models have already generated.

Initially, NAVMEP will also accept authorizations known as "engineered estimates" or "proxy requirements." These authorizations are funded positions which have not as yet been subjected to any manpower-determination study and which, therefore, lack any staffing standard or validation. Proxy requirements are to be assigned an early priority to receive validation/efficiency reviews in NAVMEP's planned authentication cycle.

These modifications to the development process will be accompanied by changes in the location of development teams. Prior to NAVMEP, the team members were located at the Navy Manpower and Material Analysis Centers at either Norfolk or San Diego. Consequently, standards-development teams had to travel to naval activities around the country in order to gather data. Under the January 1984 NAVMEP reorganization structure, the two groups will be reformed into eight new teams permanently based at strategic geographic locations. The Navy expects this reorganization to expedite the development of shore-based staffing standards, promote coordination among standards users, save travel time and expenses, provide better use of manpower analysis center resources, and provide better overall program management and execution.

**NAVMEP'S POTENTIAL IS ENDANGERED**  
**BY METHODOLOGICAL WEAKNESSES**  
**AND FUNDING INSTABILITY**

The Navy's shore-manpower determination efforts have had only limited success to date. The implementation of an umbrella program, such as NAVMEP, creates the potential for significantly

greater success in some aspects of manpower management. Consolidating the management of the various manpower efforts should improve the coordination and integration of the various systems, while redistributing the standards-development teams could save standards-development time and promote coordination among users. In addition, wider application of efficiency reviews could increase the efficiency of Navy operations, the accuracy of Navy standards, and the credibility of Navy budgets, and could earn the program greater credence and acceptance among manpower managers. These potential benefits may not materialize, however, because of NAVMEP's planned use of less rigorous standards-development methods and because of potential funding instability.

Use of questionable standards-development methods is likely to jeopardize the validity of manpower standards

The modifications which NAVMEP plans to introduce in the standards-development process seem likely to jeopardize accuracy and efficiency in order to meet the 2-year timetable. Reducing the time devoted to the process by one-half will make it harder to perform the time-consuming collection and analysis of data. As a result, the final product (the standard) is likely to be less accurate and reliable.

Adopting macro-model authorizations and "engineered estimates" may also compromise the accuracy and credibility of NAVMEP's staffing standards. Although the scope of our present review did not include assessing the validity of Navy's macro-models, these models have been examined and questioned in past GAO reports. In addition to GAO's work, reports issued by the the Navy and the Department of Defense Inspector General over a decade have identified weaknesses in the workload and management information systems of the Navy industrial community--ship-yards, air rework facilities, and weapons stations. An often identified weakness was the lack of effective work measurement systems to accurately reflect manpower requirements in relation to projected and actual workloads. This past work brings the accuracy and credibility of manpower estimates derived from these models into question.

Naval shipyards have been the subject of three GAO reports. In a March 1978 report, we noted that the Navy's workforce management system needed (1) an effective work measurement system--including work methods and labor standards--to plan for, measure, and control shipyard labor resources and (2) an effective management system for analyzing variances from labor and material standards because the management information systems used did not produce reliable data for decision-making.<sup>12</sup> We recently

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<sup>12</sup>Naval Shipyards--Better Definition of Mobilization Requirements and Improved Peacetime Operations Are Needed (GAO/LCD-77-450, March 31, 1978).

reexamined these issues and found that these problems continue.<sup>13</sup> Another GAO report in September 1978 on the Navy's Ship Support Improvement Project showed that the data base used to develop maintenance requirements was inaccurate and unreliable.<sup>14</sup>

Air rework systems were the subject of a June 1981 GAO report. In this report, we discussed the problems that Naval Air Rework Facilities had with their work measurement system and with the accuracy of workload data.<sup>15</sup>

Weapons stations were the subject of a DOD Inspector General report. This report on Navy manpower requirements for missile maintenance stated that existing procedures did not result in timely identification and programming of manpower requirements. As a result, about 140 manpower spaces valued at \$2.4 million annually were authorized for the maintenance of weapons systems which were no longer in the Navy's inventory. Also, wartime manpower requirements for weapons stations were found to be overstated by 350 spaces.<sup>16</sup>

Another methodological problem under NAVMEP concerns the use of so-called "engineered estimates." These estimates are not based on any analytical work measurement techniques but exist basically through a manpower manager's willingness to fund them. In effect, use of these estimates is tantamount to accepting a unit's current authorizations as a valid statement of that unit's manpower needs. Employing these estimates as staffing standards could discredit the entire NAVMEP program and its products. Moreover, once a requirement has been recognized as valid, user resistance to change may, in effect, insulate that requirement from any downgrading during NAVMEP's planned authentication cycle.

In short, NAVMEP's methodology seems likely to produce "standards" in less time--perhaps even within the program's goal of 2 years--but potentially at the expense of efficiency, accuracy, and credibility.

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<sup>13</sup>Navy Can Improve Management of Shipyard Labor Resources Through Better Work Measurement Practices (GAO/NSIAD-84-96, April 24, 1984).

<sup>14</sup>The Navy's Ship Support Improvement Project (GAO/LCD-78-433, Sept. 12, 1978).

<sup>15</sup>Improved Work Measurement Program Would Increase DOD Productivity (GAO/PLRD-81-20, June 8, 1981).

<sup>16</sup>Navy Missile Maintenance Manpower Requirements (Report No. 83-115, May 3, 1983).

Funding stability is important  
to the potential success of NAVMEP

In May 1983, the Navy significantly reduced the funding levels it had planned for SHORSTAMPS development and implementation. That reduction decreased funding levels from \$109.9 million to \$53.8 million for fiscal years 1984-89. This represented a cumulative reduction of \$56.1 million over the funding levels planned in April 1983 for the fiscal years 1985-89. The following month, the Assistant Deputy Chief of Naval Operations (Manpower, Personnel, and Training) responded in a memorandum to the Director, General Planning and Programming Division, that such reductions were premature and that such action "creates an unexecutable program which effectively halts the SHORSTAMPS program well short of Congressional expectations."

In its official comments on this report, DOD stated that the prior reductions to the manpower program have been reinstated and that the Navy has now programmed \$111.3 million for the manpower program for fiscal years 1985-89.

Given past experience, it is not certain that NAVMEP will continue to receive all the resources it needs for its first 2-year phase or for its subsequent authentication cycles. Erratic budgeting and staffing levels have historically plagued the Navy's manpower program. Under SHORSTAMPS, the Navy did not provide the resources--personnel and money--needed to carry out methods-improvements studies, although Navy officials acknowledged the importance of conducting such studies. Methods-improvement studies are also important to NAVMEP's credibility. Operation of the program without these resources would further degrade a standards-development process already jeopardized by questionable methods and would probably cause the program's goals to slip considerably.

AGENCY COMMENTS  
AND OUR EVALUATION

DOD officials stated that they recognize that the SHMD program will fall short of meeting congressional expectations for rigor in the short term (December 1985), but that an improved baseline will be achieved, to which increasingly rigorous methodologies will be applied concurrently and in following years. Standards development will integrate the efficiency review (methods improvement) and the standards-development processes in order to produce manpower requirements based on the most efficient organization (MEO) achievable. DOD officials also stated that NAVMEP will correct the weaknesses that existed in SHORSTAMPS.

Officials also indicated that DOD recognizes that reducing the standards-development process time by one-half and using macro-model techniques, among others, in the calendar year 1985 phase of the program is a compromise between economics and urgency on the one hand and the ultimately required accuracy and

credibility of SHMD standards on the other hand. The Navy will not use the "engineered estimate" methodology subsequent to the calendar year 1985 phase. This approach is a short-term necessity in order to provide the Navy with a more comprehensive view of manpower needs while concurrently developing more rigorous staffing standards incorporating the efficiency review (methods improvement) process.

In addition, officials stated that DOD shares the GAO concern over the accuracy and credibility of manpower estimates derived from macro-models. Therefore, the Navy will use macro-models developed by manpower claimants, such as CNM, only to ascertain a baseline of currently funded authorizations which are associated with that methodology. At the same time, Navy officials indicated that a credible modeling methodology will be necessary to move from function-oriented SHMD staffing standards to the program-oriented budget process. In recognition of this need, the Navy has implemented a new approach--the Manpower Estimating Model (MEM). This new approach is to be based on current SHMD staffing standards, ER, MEOs, SHOROC Tasking and workload data resident in the NMRS. This methodology will model manpower requirements and provide the needed crucial link to the PPBS process.

## CHAPTER 4

### CONCLUSIONS AND RECOMMENDATIONS

In response to congressional concerns about the validity and rigor of its shore-based manpower needs, the Navy implemented SHORSTAMPS. Through this program, the Navy has been developing staffing standards for its shore establishment functions for about 10 years at a cost of over \$88 million. Although the Navy has made progress in managing its shore-based manpower by adopting work measurement concepts and methods, SHORSTAMPS has not met congressional expectations for rigor and credibility. This has been primarily due to lack of monitoring and enforcement at all levels and to inaccurate data.

Our review found major problems in SHORSTAMPS. In theory, the program aimed at incorporating the key elements of an effective manpower-planning system (described in app. I). In practice, however, it did not do so.

This review and our previous work in this area lead us to believe that lack of oversight by the CNO and inadequate management controls at all levels are largely responsible for the ineffectiveness of SHORSTAMPS as a manpower-management system for the Navy's shore establishment. This ineffectiveness has prompted Navy officials to look for another solution to congressional concerns about the credibility and rigor of its shore-based manpower programs.

The Navy's solution is SHMD (under NAVMEP), a collection of existing manpower-determination methods, some of which past studies by GAO and others have generally disclosed to be unreliable and lacking in rigor. By incorporating those questionable shore-based manpower-determination methods under SHMD, the Navy will be giving official recognition to the processes which the Congress was expecting SHORSTAMPS would improve. Consequently, the Navy and the Congress still do not have assurance that annual budgets for the \$12-billion Navy shore workforce are justified, based on credible work measurement techniques. However, despite their defects, we believe that SHMD is still better than no system at all and ought to be improved rather than abandoned.

#### THE NAVY NEEDS TO IMPROVE ITS OVERSIGHT OF MANPOWER PLANNING

Many of the problems we found can be attributed to inadequate oversight of the manpower-requirements program. We found that the CNO has not monitored or enforced the application and use of SHORSTAMPS standards to justify the Navy's shore-based manpower, despite directives requiring compliance. The result is that few commands have used the standards approved by the CNO to manage their manpower or to justify budget requests. Furthermore, few commands have actually applied the standards to analyze

or assess what the impact would be on their manpower resources. While a number of technical problems have contributed to the lack of use of manpower standards, we do not believe that just correcting those specific problems will necessarily increase the use of standards.

#### Monitoring and enforcement

We believe that the key reason manpower standards are not used is the absence of efforts to monitor and enforce the use of standards. We believe that the Navy should require that staffing standards be used to determine and manage shore manpower in accordance with the CNO promulgation and implementation instructions. We therefore recommend that the Secretary of the Navy direct that commands be required to

- certify that they have reprogrammed authorizations and resources (both military and civilian) to conform to requirements generated by approved SHMD standards,
- submit SHORSTAMPS justification for any manpower increases requested in any function for which an approved SHMD standard exists,
- certify that they have reapplied all applicable standards before each budget cycle, and
- maintain local records to support and document the initial application and periodic reapplications of the standards.

In order to ensure compliance with the CNO-directed implementation instructions, we recommend that the Secretary of the Navy direct the CNO to

- reemphasize its monitoring and enforcement program.

#### NAVMEP incorporates unreliable methods and processes

We are concerned that under NAVMEP, in the interest of meeting the time schedule and gaining acceptance by user commands, the Navy will give sanction to manpower-determination methods and processes which are unreliable and lacking in rigor and which, therefore, fall short of congressional expectations for improved manpower management. Until NAVMEP uses manpower-determination methods that can meet the standards of rigor of accepted work measurement techniques, the Navy's statement of its shore-based manpower requirements will continue to lack credibility.

Confidence in the manpower requirements determined by NAVMEP will depend on the perceived rigor of the staffing standards used. In order to obtain as much credibility as possible, we recommend that the Secretary of the Navy

- establish a program to systematically examine for soundness/rigor all standards, methodologies, and processes to be used by NAVMEP to determine manpower requirements, and
- introduce accepted work measurement techniques where feasible.

#### CONCLUSIONS AND RECOMMENDATIONS REGARDING TECHNICAL PROBLEMS

Our review also found a variety of technical problems in both SHORSTAMPS and NAVMEP. However, as noted earlier, correcting these problems alone without provisions for monitoring and enforcement of the use of staffing standards is unlikely to substantially improve the Navy's manpower management.

#### Coverage by credible staffing standards needs to be increased

A significant problem in the staffing standards area is the limited coverage that has been achieved. Standards developed through accepted work measurement techniques still do not exist for the majority of the Navy's shore workforce. In addition, the 37 percent "coverage" claimed by the Navy is misleading since the standards which have been developed are generally not being applied.

In our examination of the Navy's progress in implementing SHORSTAMPS, we identified several factors which, in our view, contributed to the slow rate of progress. These factors were erratic funding, poor contractor products, and little emphasis on retaining and utilizing trained manpower analysts. We therefore recommend that the Secretary of the Navy

- provide the short- and long-term funding stability necessary for completing standards development and for reviewing and updating them periodically;
- consider establishing a manpower management career field for military personnel, with defined standards of background, education, training, experience, and tenure for positions; and during the interim, consider formalizing and implementing a long-range tracking system to capitalize on experience of manpower-trained officers and enlisted personnel; and
- consider expediting the implementation of the Civilian Career Program in manpower management established by the Vice Chief of Naval Operations in September 1981.

Questionable standards-development methodologies should not be used

Based on previous examinations of the validity of manpower data emanating from the use of macro-models and the lack of rigor inherent in the so-called "engineered estimates," we believe that the validity and credibility of staffing standards developed under NAVMEP's alternative methodologies will be highly questionable.

We support the Navy's attempt to bring as much of its shore establishment under the coverage of standards as possible. However, we are concerned that, in its effort to achieve total coverage in only 2 years, the Navy will have to resort to short-cuts and the use of questionable methodologies. We therefore recommend that the Secretary of the Navy

--reconsider NAVMEP's planned use of macro-models as a method of determining manpower requirements.

Under its SHORSTAMPS program, the Navy recognized that not all shore functions can be addressed in a cost-effective manner using work measurement techniques. The SHORSTAMPS target was to develop standards for 70 percent of the shore positions. While we have not assessed the appropriateness of the 30 percent portion for which the Navy believed standards could not be cost-effectively developed, we agree that some jobs and functions are either unamenable to work measurement techniques or are so sparsely populated that developing standards would not be worthwhile.

We are concerned that NAVMEP's announced goal of bringing 100 percent of the shore establishment under "standards" might cause misunderstanding. In actuality, a considerable portion of the Navy shore establishment will remain unaddressed using accepted work measurement techniques. The so-called "engineered estimates" are actually no more than best guesses or estimates based primarily upon subjective judgments about the numbers and types of manpower needed. In order to avoid potential misunderstanding concerning the rigor of the processes used, we recommend that the Secretary of the Navy

--direct that the terms "work measurement," "standards," or "engineered" not be used to refer to manpower requirements criteria which have not been developed through the use of accepted work measurement techniques.

Methods-improvement studies need to be performed

We found that the standards which have been developed have not incorporated methods-improvement studies to determine whether tasks being done are actually required and whether required tasks are being done using the most efficient work methods. In the absence of such studies, any standards which are developed are

likely to identify staffing needs based, at least in part, on historical inefficiencies which exist in the way various jobs are performed.

As we did in 1980, we endorse the conduct of methods-improvement studies. However, we are concerned that, although the SHORSTAMPS plan called for methods-improvement studies to occur when standards undergo review, these studies are still not being performed. Under NAVMEP, methods-improvement studies may again be assigned a secondary priority. We believe that the performance of methods-improvement studies is crucial to the development of credible manpower requirements. We therefore recommend that the Secretary of the Navy

--consider performing methods studies prior to the development of standards, and

--commit the short- and long-term funding and staff resource stability necessary for ensuring the incorporation of methods-improvement studies into the manpower-requirements determination process.

#### SHOROC definitions need to be clarified

Our audit work, as well as that of the Naval Audit Service, found a number of problems concerning the clarity of SHORSTAMPS workload-parameter definitions. This problem of vague or ambiguous definitions is a likely contributor to the problem of inaccurate workload data and, consequently, inaccurate manpower requirements. We recommend that the Secretary of the Navy

--direct that efforts be intensified to clarify SHOROC definitions so that they are easily understood and less open to misinterpretation.

#### Management controls are needed

While workload-parameter definition problems, as well as the lack of awareness of the importance of accurate workload data among those who submit the data, are likely contributors to inaccurate data submissions, we believe that an additional factor is the absence of a system of management controls to monitor and verify the data. We recommend that the Secretary of the Navy

--direct that steps be taken to ensure that submitted parameter values are accurate by (1) monitoring and validating data submissions, (2) requiring that formal record-keeping systems on parameter submissions be maintained at the activity level, and (3) educating activity department heads on the importance of accurate submissions of parameter values.

Impediments to the application and use of SHORSTAMPS need to be removed

With regard to the application and use of SHORSTAMPS, our review identified a number of obstacles which, while they do not necessarily preclude the application and use of SHORSTAMPS standards, do require users to put forth effort to overcome them. We believe that the obstacles of BOC code inaccuracies and data-processing limitations, for example, inhibit the use of standards by making the system more cumbersome and difficult to use. In addition, these impediments may provide a rationale for not using SHORSTAMPS standards. We therefore recommend that the Secretary of the Navy direct that steps be taken to remove these impediments by

- expediting action to purify the NMDAS data base so that meaningful comparisons between funded authorizations and unfunded requirements can be made,
- continuing with the effort to ensure that BOC codes are accurately assigned,
- expediting the MANCLASS efforts to provide major commands with automated access to manpower data bases, and
- developing a method for translating functional requirements into program requirements.

AGENCY COMMENTS  
AND OUR EVALUATION

DOD generally concurred with all but one of the recommendations in this report. DOD agreed to improve oversight of manpower planning and to correct the various technical problems besetting SHORSTAMPS and NAVMEP. However, DOD did not concur with our recommendation that Navy establish a career field in manpower management for military personnel.

In concurrence with our recommendations for increased monitoring and enforcement of the use of standards, DOD stated that Navy regulations will be revised to require

- certification of annual reapplication of standards,
- submission of standards-driven justification of increased manpower requests,
- certification of the reapplication of all applicable standards before each budget cycle, and
- maintenance of standards application/reapplication records.

In our draft report, we recommended that the CNO assign explicit responsibility and authority for monitoring and enforcing the manpower-requirements program. In response, DOD stated that monitoring and enforcement authority already exists and is vested in the Deputy Chief of Naval Operations (Manpower, Personnel and Training). Accordingly, we have changed our recommendation and now recommend that the Secretary of the Navy direct the CNO to ensure that its monitoring and enforcement program be emphasized.

In our draft report, we also recommended that the Navy reexamine its reliance upon contractors for the development of standards and that it require the Civilian Position File to be more routinely updated. In response, DOD stated that the Navy had terminated all contractor efforts for standards development and has required all authorization files (officer, enlisted, and civilian) to be updated as authorization changes occur. Accordingly, we have deleted these recommendations from the final report.

With regard to our recommendations that the rigor of the standards-development processes be reexamined, DOD indicated that NAVMEP consists of a variety of techniques, of which some are more rigorous than others. DOD believes that the short-term necessity of using less rigorous techniques between now and the end of calendar year 1985 is a valid use of those methods because they will be used to establish a requirements baseline. After December 1985, as more efficiency reviews are performed, this baseline will be iteratively evaluated for the express purpose of refining requirements and justifying them by means of the most rigorous techniques feasible. We are pleased to note that the Navy recognizes the need for rigor and intends to use less rigorous techniques only until better standards are developed.

In commenting on the other recommendations, DOD stated that the Navy

- intends to budget appropriate funding and personnel to support the NAVMEP program;
- will expedite the implementation of the Civilian Career Program in manpower management;
- will phase out the use of CNM's macro-models for manpower requirements determination out as soon after calendar year 1985 as applicable SHMD standards and MEMS are developed;
- will not include "engineered estimates" as a valid methodology for determining requirements;

- will incorporate methods studies into the standards-development process;
- will establish a Manpower Assessment Team to perform a quality-control function with regard to SHOROC subsystem definitions and data submissions; and
- will purify the data systems used in manpower management, and that TFMMS, which is expected to be available for use in fiscal year 1986, will develop comparisons between requirements and authorizations.

The only recommendation with which DOD did not generally agree concerned the establishment of a career field for military personnel in the area of manpower management. DOD stated that the Navy has no plans to establish a manpower and personnel career field for officers and enlisted personnel. Instead, the Navy will continue to use its Officer Subspecialty and Navy Enlisted Classification systems to provide NAVMEP with the majority of its manpower management personnel. Navy officials stated that the Manpower, Personnel and Training Analysis (MPTA) subspecialty is comprised primarily of Unrestricted Line Officers. These officers must complete required sea tours to stay competitive for promotion and command within their warfare specialty. They are, however, frequently detailed to MPTA subspecialty billets during their shore tours. Furthermore, the Navy is paying considerable attention to retouring these skilled officers.

We continue to believe that the Navy would benefit from the establishment of a separate career field for manpower managers. The existence of a manpower field would provide the career incentives necessary to attract and retain high quality personnel in the manpower area. It would also provide greater professionalism and increased utilization of training as personnel rotate routinely within the manpower-management community. Finally, it would eliminate an additional demand which is currently being placed on the supply of personnel with warfare designators and primary skills that are in high demand in the fleet.

ELEMENTS OF AN EFFECTIVE  
MANPOWER-PLANNING SYSTEM

An effective manpower-planning system must have a number of specific attributes.<sup>1</sup> These attributes involve three key areas--the development of staffing standards, the measurement of workload, and the application and use of staffing standards.

Staffing standards should meet the following criteria:

- The scope of the function is clearly identified and well-defined down to and including the task level.
- Staffing standards are developed for as much of the workforce as feasible.
- Implementation plans reflect standards coverage by functions and include milestones for reviewing and updating standards.
- Workload to be measured is clearly identified and well-defined.
- Data on how long it takes to perform a given task or function (staff-hour data) is collected through accepted work measurement techniques (such as time study, work sampling, analysis of past performance, or operational audit).
- Staffing standards are developed based on the most efficient method of performing the function under examination.<sup>2</sup>
- The standards specify the required skill/grade level and occupational specialties. Standards also include all personnel associated with the function studied.

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<sup>1</sup>A number of previous GAO studies have identified and discussed the attributes of effective systems: Development and Use of Military Services' Staffing Standards: More Direction, Emphasis, and Consistency Needed (GAO/FPCD-77-72, Oct. 18, 1977); Handbook for Government Work Force Requirements (GAO/FPCD-80-36, Jan. 28, 1980); and Federal Workforce Planning: Time for Renewed Emphasis (GAO/FPCD-81-4, Dec. 30, 1980).

<sup>2</sup>The analysis of a job to determine the most efficient way of performing it is often referred to as a "methods-improvement study."

- Work-center level standards (i.e., standards developed at the unit level) are capable of being aggregated into higher level summary standards to reflect required positions as a function of one or more programming factors (such as aircraft repairs on ship overhauls).
- Procedures for developing, issuing, and updating both work-center and summary-level standards are clearly defined and documented. Such procedures cover the required quality control of the data collection and computations used in developing standards, and define the variables to be considered, such as length of work week, allowances for fatigue and delay, and training.
- Workpapers documenting the procedures, analysis, and results of the original standards-development process or any subsequent review are maintained to aid in the process of periodic reassessment/revalidations.

The measurement of workload data should meet the following criteria:

- The sources of the data for applying staffing standards are clearly identified and defined.
- The sources of workload data are as consistent as possible throughout the service.
- The methodology for projecting future workload is clearly documented.
- Workload data is reviewed and certified for accuracy prior to applying standards.
- A record-keeping system for documenting actual and projected workload is maintained.

The application and use of staffing standards should meet the following criteria:

- Personnel budget requests are justified and supported, to the maximum extent possible, by the application of staffing standards.
- Staffing standards are used in managing the organization's workforce and responding to changes in force levels.
- Specific responsibility and authority for monitoring and enforcing the use of standards is assigned.

- Sufficient numbers of qualified personnel are available to develop, review, apply, and update the standards and programming factors.
- The manpower standards program is organizationally situated at an appropriate level to allow it to ensure credibility and consistency in policy and implementation.

EXAMPLE: DETERMINATION OF  
MANPOWER REQUIREMENTS  
FOR FEEDING SHORE-BASED ENLISTED PERSONNEL

The Navy determines manpower requirements in several steps:

1. It determines the workload of the unit--the amount of work a unit must perform in a particular period.
2. It applies work measurement techniques--methods of analyzing work data in relation to such factors as time or costs.
3. It develops staffing standards--expressions of the time it takes a qualified worker to accomplish a defined amount of work under normal conditions.
4. It applies the staffing standards to the units workload to determine the unit's staffing needs or workforce requirements--the aggregate number and type of skills needed to perform an organization's work (as expressed in staff hours or values of workload factors/SHOROC parameters).
5. It sets forth such requirements according to the number of staff hours of work to be performed in staffing tables.

For example, to determine the type and manpower needed for feeding shore-based enlisted personnel, Navy manpower teams would first determine the workload by selecting sample sites and then gathering data on the operation of the enlisted dining facilities at those sites over a certain length of time. This data would include information on hours of operation, serving lines, supplies, sanitation, records management, and supervision.

Once the teams have gathered this data, they would apply work measurement techniques. That is, they would determine such parameters defining the work as "average meals fed per month" or "total serving lines operated per week."

Out of such measurements, they would develop a staffing standard. For instance, the standard might state how many staff hours are required to operate a facility serving 2,500 meals a month.<sup>1</sup>

The terms would then apply staffing standards to the unit's workload in order to determine the staffing needs or workforce requirements of the unit. That is, they would determine the types of workers (such as cooks, bakers, cashiers, or accounts clerks) needed, their grades (such as GS-4, WG-5, or MS2), and their numbers.

Finally, the Navy would set forth the requirements in a staffing table like the one shown on the following page. For instance, using the standard referred to above, an enlisted dining facility serving 2,500 meals a month and operating 26 serving lines a week would generate 3,401.26 staff hours of work monthly. According to the staffing table, column 3, this facility would need 3 MS2 or WG-8 cooks, 3 MS3 or WG-5 cooks, and 18 other employees for a total of 24 manpower requirements.

The Navy determines manpower requirements for other functions covered by SHORSTAMPS standards in a similar manner.

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<sup>1</sup>More precisely, the actual Navy standard for operating an enlisted dining facility is

$$Y = 0.466x_1 + 86.01x_2,$$

where Y = the computed monthly staff-hours,  $x_1$  = the average meals served in one month, and  $x_2$  = the total serving lines operated in a week. Using parameter values of 2,500 meals ( $x_1$ ) and 26 serving lines ( $x_2$ ), the monthly staff-hours (Y) would be  $0.466(2,500) + 86.01(26)$ , or 3,401.26 staff-hours.

STAFFING TABLE

WORK CENTER/RFC CODE: Operate an Enlisted Dining Facility/SUP04.012									
BILLET/POSITION TITLE	DESIGNATOR GRADE/RATE/ RATING	NOBC/ NEC/ AQD	BREAKPOINTS: COMPUTED MONTHLY MAN-HOURS						
			3105.51 3250.50	3250.51 3350.78	3350.79 3501.04	3501.05 3673.50	3673.51 3818.50	3818.51 3963.50	3963.51 4108.50
MANPOWER REQUIREMENTS									
Food Service Officer	7520/0	1130	*	*	*	*	*	*	*
Senior MS or Cook Foreman	MSC WS-7404-8		1	1	1	1	1	1	1
Subsistence Records or Accounts Maint. Clerk	MS2 GS-525-4		1	1	1	1	1	1	1
Watch Captain or Cook Leader	MS1 WL-7404-8		2	2	2	2	2	2	2
Cook or Cook	MS2 WG-7404-8		3	3	3	3	3	3	3
Cook or Cook	MS3 WG-7404-5		3	3	3	4	4	5	5
Baker or Baker	MS2 WG-7402-8		1	1	1	1	1	1	2
Baker or Bakery Worker	MS3 WG-7402-5		1	1	1	1	2	2	2
Subsistence Storekeeper or Warehouseman	MS2 WG-6907-5							1	1
Subsistence Storekeeper or Warehouseman	MS3 WG-6907-4		1	1	1	1	1		
MAA	P02 (G)		1	2	2	2	2	2	2
Cashier	P02 (G)		1	1	2	2	2	2	2
Food Service Worker or Foodservice man	WG-7408-2 AN/FN/SN		7	7	7	7	7	7	7
Totals			22	23	24	25	26	27	28

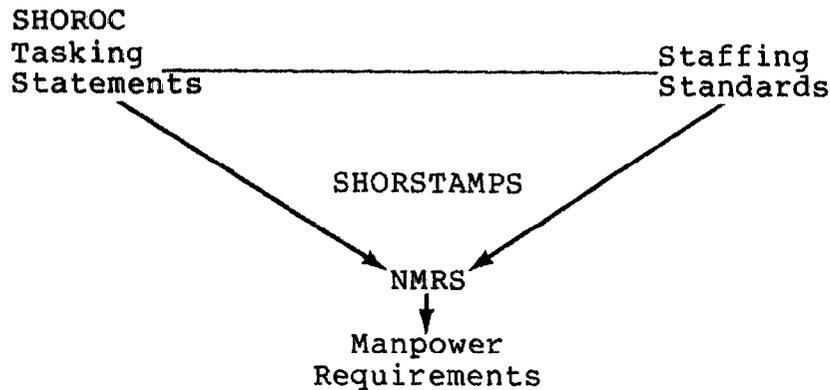
\* Is Collateral Duty of Supply Officer

§ MS Is Navy's rating designator for Mess Management Specialist

DESCRIPTION OF THE  
SHORSTAMPS PROGRAM

SHORSTAMPS is composed of two subsystems: a "Shore Required Operational Capability" (SHOROC) subsystem and a staffing standards subsystem. The Navy Manpower Requirements System (NMRS), a data processing capability, integrates the two subsystems to calculate minimum manpower requirements. The following diagram shows the interrelationship of the SHORSTAMPS subsystems.

Interrelationship of  
the SHORSTAMPS Subsystems



SHOROC subsystem

The SHOROC subsystem provides the basis for the development of staffing standards and, ultimately, for the determination of the minimum quantity of personnel required to do specific jobs. In essence, SHOROC is a dictionary of standardized and quantified tasking statements which identify the kinds of tasks done and how much of each kind is done at individual Navy shore establishments. The subsystem is designed to project known changes in Navy tasking and to separate mission-essential tasks from those which may be deferred because of insufficient resources or other constraints.

The SHOROC subsystem is divided into four hierarchical elements:

- Mission areas are broad categories or major subdivisions of the overall shore establishment's missions, such as supply, aircraft maintenance, financial and medical services, and ship repair.
- Functional areas are the various functions performed within each mission area, such as providing ancillary supply services, performing intermediate level maintenance on designated aircraft, and providing internal medicine services.

- Required functional capabilities (RFC) are the specific tasks performed within functional areas--such as operating an enlisted dining facility, operating a shop store, and issuing recruit clothing--which are specific tasks (i.e., required functional capabilities) within the functional area of providing ancillary supply services.
- Parameter values are quantifications of how much of each required functional capability is done in terms of the quantity, frequency, and duration of work performed--such as average rations fed per month and total serving lines operated per week--which quantify the workload associated with operating an enlisted dining facility.

An example of the SHOROC elements associated with operating a Navy enlisted dining facility are shown below:

SHOROC Subsystem Elements

<u>Element</u>	<u>Designator</u>	<u>Description</u>
Mission area	SUP	Provide supply management and administrative control; procure, receive, account for, store, issue, and control material; and perform ancillary services.
Functional area	SUP04	Provide ancillary supply services.
Required functional capability	SUP04.012	Operate an enlisted dining facility.
Parameters		Serve an average of <u>9,100</u> rations monthly using a total of <u>21</u> serving lines per week.

The magnitude of the SHOROC subsystem is immense. As of January 1984, the subsystem included 26 shore establishment mission areas, 302 functional areas, and 6,068 required functional capabilities with from 1 to 6 parameters per RFC.

The SHOROC subsystem is dynamic, and periodic changes to it are required on a continuing basis to adjust for changes in tasking, workload variations, erroneous input, and the subsystem processes for standards development.

### Staffing standards subsystem

The staffing standards subsystem uses SHOROC tasking information to develop mathematical equations or algorithms that translate workload data into expressions of quantitative and qualitative manpower requirements. Teams from the Navy Manpower and Material Analysis Centers in Norfolk and San Diego develop standards for particular SHOROC functions.

In developing staffing standards, individual standard equations are produced for tasks that are reasonably the same. The tasks are normally grouped together into what is called a "work center," and an equation is developed for each work center. The work center is a grouping of workers who use similar machines, processes, methods, and operations and who perform homogeneous work, usually located in a centralized area. A work center normally equates to a required functional capability in the SHOROC subsystem, but it may also equate to a combination of such capabilities within a functional area or to a total functional area. Standard equations covering closely related work centers may be grouped together and published as one staffing standards report.

In developing a standard, workload factors may appear that are unique to certain locations and that have a significant impact on the staffing requirement. In these cases, "additive" standards are developed to handle the special requirements and to identify major differences, such as special requirements because of location, climate, or tenant-support demands. The differences must be significant enough to make it impractical to use a single standard for all work centers.

The standards-development subsystem recognizes that developing a staffing standard is not a one-time effort. The estimated useful life of a staffing standard is from 2 to 5 years. Once a specific standard has been developed, it must be updated to maintain currency on the way tasks and functions are being performed. For this reason, standards-development policy includes provision for frequent updating of existing standards.

The technical aspects associated with the development and implementation of staffing standards are complex and time-consuming. According to manpower analysis center officials, this process generally takes from 30 to 36 months.

The development of staffing standards has three phases: preliminary, measurement, and computation. During the preliminary phase, the staffing standards development team acquires as much knowledge as possible about the area to be studied, develops a study plan, and prepares for the measurement phase. Significant steps in the preliminary phase are

--establishment of liaison with program managers, major manpower users, and technical experts;

- orientation of work center personnel and operating officials;
- identification of work centers;
- development of work center descriptions;
- identification of work units and potential workload factors;
- selection of appropriate work measurement methods;
- selection of measurement locations;
- installation of a work-count system; and
- identification of potential management-improvement recommendations;

Once developed, the measurement plan is sent to those major commands expected to use the standard for their review and comment. The plan is concurrently field-tested ordinarily at no more than three shore activities and is revised as necessary.

The measurement phase consists of on-site visits to a statistical sample of shore activities to collect workload and manpower data according to the measurement plan. One or more work measurement techniques generally will be used: work sampling, time study, operational audit, predetermined time standards, and queuing (waiting line) theory. Through the use of these and other techniques, workload is measured in terms of staff hours. This information is then used in the computation phase to develop the standards equation.

During computation, the staffing standards team examines and analyzes the results of the measurement plan. All suspected variables for the function studies are put through a series of statistical tests to determine whether they do, in fact, have an impact on manpower requirements. Again, using statistical techniques, the staffing standard equation is developed. Staffing tables are then constructed showing the breakpoints for each incremental increase in manpower (see app. II for an example). These tables display quantity and quality of each manpower space and identify it as military only, civilian only, or either military or civilian.

Following computation, NMRS provides the automatic data processing to merge the staffing standards with the SHOROC tasking to calculate manpower requirements. This is called the application phase of staffing standards processing.

At the beginning of the application phase, NMRS produces a manpower requirements worksheet for each activity affected by the standards. NMRS applies the SHOROC information for each activity to the staffing standard equation and calculates a total staff-hour figure for each required functional capability. The total staff-hour figure is supplemented or adjusted for unique requirements associated with a particular activity and is then used to generate the correct number of positions. This information is listed on the manpower-requirements worksheet. Summary manpower-requirement worksheets are produced for each major command. Ultimately, the staffing standards report, activity worksheets, and summary worksheets are sent to the user commands for review and comment. The user commands indicate on the worksheets whether they wish to fill the positions with military or civilian personnel or to handle the work through contract.

During application, changes to the SHOROC dictionary may be necessary as a result of the work performed by the staffing standards development teams. In addition, the equations for the standards may be changed as a result of the user command's reviews.

When all necessary changes have been made, the final manpower-requirements document (shore manpower document) is produced. This document shows each affected activity's manpower requirements for each required functional capability covered by developed standards, and the number of authorized spaces to be covered by approved staffing standards.

A staffing standard is considered complete and ready for implementation when the application process is finished and when the CNO has approved the standard for use. "Implementation" means that commands using the manpower requirements as calculated by the standard must make a conscious decision to change or not to change activity manpower authorizations. Changes in these manpower authorizations can take place, in the short run, through reprogramming existing authorizations or, in the long run, through future budget requests for additional authorizations.

GENERAL ACCOUNTING OFFICE  
REPORT TO THE SECRETARY  
OF DEFENSE

THE NAVY'S SHORE  
REQUIREMENTS, STANDARDS,  
AND MANPOWER PLANNING  
SYSTEM (SHORSTAMPS)--DOES  
THE NAVY REALLY WANT IT?

D I G E S T

Congressional committees have criticized the Navy for its lack of an acceptable manpower planning program for shore establishments which use over half the Navy's personnel. The Navy recognized the need and in 1972 began work on a new system called SHORSTAMPS (Shore Requirements, Standards, and Manpower Planning System).

SHORSTAMPS is a functional and comprehensive system for determining shore establishments' manpower needs. It incorporates proven industrial engineering and statistical work measurement techniques. Although simple in concept, it is technical and complex in execution. But does the Navy really want it? Lack of commitment to the program indicates that it may not.

The Navy does not anticipate having staffing standards for most of its shore establishment positions until 1987, and even this target date is contingent on a significant increase in resources. If the additional resources are not provided, it is unlikely that SHORSTAMPS standards development and implementation will be completed before 1992.

In May 1979 the House Armed Services Committee directed the Navy to present a plan by September 30, 1979, which would substantially comply with its earlier commitments. On October 22, 1979, the Navy reported on SHORSTAMPS and said that important corrective actions had been completed and other critical improvements were underway.

SHORSTAMPS' slow progress is indicative primarily of one basic problem--lack of top Navy management commitment. This lack of commitment is most apparent by the Navy's failure to develop and approve a comprehensive plan for administering and integrating SHORSTAMPS into Navy practice. Moreover, continuity of effort

and program accountability are burdened by obstructions to manpower and personnel manager professionalism caused by Navy's military personnel rotation practices and deficiencies in its civilian career management program. Consequently, SHORSTAMPS has been beset by critical problems that have hindered its development and implementation:

- Inadequate program accountability and decisionmaking stability.
- Insufficient funds and people.
- High turnover of trained and experienced personnel.
- Major problems in the shore-required operational capability subsystem.
- Inadequate training and assistance for users.
- Lack of tested and approved implementation procedures.

The key to SHORSTAMPS' implementation is the development and approval of a comprehensive plan. Such a plan should aid Navy headquarters and the Congress in (1) defining clearly SHORSTAMPS' short-term and long-term goals and the resources needed to achieve them, (2) identifying the magnitude and priorities of program activities, (3) measuring the program's progress, (4) identifying problem areas early and taking appropriate actions to resolve them, (5) establishing accountability at all levels of management, and (6) evaluating the program's effectiveness.

Navy headquarters also needs to establish more effective controls, including systematic information feedback on program goals and achievements, to assure that standards are uniformly applied throughout shore establishments, consistent with Navy policy.

#### RECOMMENDATIONS

In view of the Navy's past performance on the SHORSTAMPS program, the Secretary of Defense,

with the Secretary of the Navy's assistance, should complete the development, approval, and execution of a comprehensive plan that includes:

- Clearly defined short-term and long-term objectives and responsibilities and realistic estimates of the resources necessary to achieve them.
- Identification of the magnitude and priorities of program activities, including the standards reports to be developed and implemented and approved procedures to be used in (1) maintaining valid data on shore-required operational capability data, (2) developing and implementing the standards, and (3) establishing accountability at all levels of management.
- Provisions for realistically measuring program progress; recruiting, training, and retaining SHORSTAMPS personnel; and assessing program effectiveness.

To retain SHORSTAMPS institutional expertise and to establish and facilitate accountability for implementing staffing standards, the Secretary of Defense should require the Navy to:

- Establish both manpower and personnel management career fields for military personnel, with defined standards of background, education, training, experience, and tenure for positions, and establish viable and complete career management systems for civilians in both the manpower and personnel functions.
- Consolidate all manpower management functions and responsibilities for military and civilian personnel Navy-wide and assign one office the authority to redistribute resources to reflect staffing standards requirements.
- Develop and use a control system which defines the responsibilities of headquarters officials and commanders at local shore establishments and provides for a

common data base, through information feedback on program goals and achievements, that can be used to meet the manpower and budgeting needs of managers at all levels.



## THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

MANPOWER,  
INSTALLATIONS  
AND LOGISTICS

11 DEC 1984

Mr. Frank C. Conahan  
Director  
National Security and  
International Affairs  
Division  
United States General  
Accounting Office  
Washington, DC 20548

Dear Mr. Conahan:

This is the Department of Defense (DoD) response to your draft report on "Navy Manpower Management: Continuing Problems Impair the Credibility of Shore Establishment Requirements" (GAO assigned code 967094) (OSD Case No. 6604).

The report will be of benefit to the Navy as it continues implementation of its Navy Manpower Engineering Program (NAVMEP) and the Shore Manning Documents portion (formerly SHORSTAMPS) of that program. The implementation of NAVMEP is complex, but will significantly enhance the Navy's management of its shore establishment manpower program. Your review was conducted in the early stages of development of NAVMEP, and, as can be seen in the attached specific responses, many of your concerns have already been addressed by the Navy.

Sincerely,

A handwritten signature in black ink, appearing to read "Jerry L. Calhoun".

Jerry L. Calhoun  
Principal Deputy Assistant Secretary of Defense  
(Manpower, Installations & Logistics)

Attachment

## DEPARTMENT OF DEFENSE COMMENTS

ON

GAO DRAFT REPORT- DATED SEPTEMBER 7, 1984

(GAO CODE NO. 967094) - OSD CASE NO. 6604

ON

"NAVY MANPOWER MANAGEMENT: CONTINUING PROBLEMS IMPAIR  
THE CREDIBILITY OF SHORE ESTABLISHMENT REQUIREMENTS"

\* \* \* \* \*

## FINDINGS

- o FINDING A: Weaknesses Continue To Exist In The SHORSTAMPS Program. The Shore Requirements, Standards, and Manpower Planning System (SHORSTAMPS) program has been under development for about 10 years, with over \$88 million having been funded for the program through fiscal year 1984, however, GAO found that most of the problems identified in a 1980 report (see Appendix [IV] summary of GAO's findings, conclusions, and recommendations) continue to exist. GAO further found that because of its dissatisfaction with SHORSTAMPS, in December 1983 the Navy approved an alternative program, the Navy Manpower Engineering Program (NAVMEP). GAO concluded that although the Navy has made progress in managing its shore based manpower by adopting work measurement concepts and methods, SHORSTAMPS and NAVMEP fall short of meeting congressional expectations for rigor and credibility, due to continuing problems. GAO further concluded that despite their defects, SHORSTAMPS and NAVMEP are still better than no system at all and should be fixed rather than scrapped. [pp. v, 6]

DOD RESPONSE: Partially Concur. It must be recognized that SHORSTAMPS (now the Shore Manpower Document (SHMD) Program) and the Navy Manpower Engineering Program (NAVMEP) are not synonymical programs. NAVMEP is an umbrella program that includes the Ship Manpower Document (SMD) Program, Squadron Manpower Document (SQMD) Program, Commercial Activities (CA) Program, SHMD and other manpower requirements determination methodologies, such as Navy Manpower Mobilization System (NAMMOS), Hardware/Manpower Integration (HARDMAN), etc. Responses concerning this report will be in the context of the SHMD Program.

Navy recognizes that the SHMD Program will fall short of meeting congressional expectations for rigor in the short term (December 1985), but an improved baseline will be achieved to which increasingly rigorous methodologies will be applied concurrently and in following years. Standards development will integrate the efficiency review (methods improvement) and standards development processes to: critically scrutinize manpower and material resources and

GAO note: Page references have been changed to correspond with those of the report.

existing procedures and organizational structures; promote efficiencies and effectiveness; and, incorporate efficiencies into staffing standards. The end result is to produce manpower requirements based on the most efficient organization achievable. NAVMEP will correct the weaknesses that existed in SHORSTAMPS. Specific corrective actions are discussed in the responses which follow.

- o **FINDING B: Majority of Navy's Shore Manpower Is Not Covered By Staffing Standards.** GAO found that, although some progress toward developing and approving standards for work done in the shore establishment has been made since its 1980 review, the majority of Navy shore based manpower was still not covered by SHORSTAMPS staffing standards as of December 1983. GAO further found that approximately 600,000 military and civilian personnel are assigned to Navy's shore establishments, however, the Navy had developed and promulgated 95 standards reports applying to only about 217,500 or 37 percent of the shore establishment workforce. GAO concluded that the slow progress being made has prolonged the Navy's lack of capability to effectively manage its available shore resources and credibly justify its staffing needs as directed by the Congress. The GAO further concluded that the 37 percent "coverage" claimed by the Navy is misleading since the standards which have been developed are generally not being applied. [pp. 8, 37]

**DOD RESPONSE:** Concur. Although progress toward developing and approving standards has been hampered by erratic program budgeting, poor contractor products, and difficulties in retaining trained analysts; progress is being made. Currently, Navy has promulgated 117 standards covering 229,000 spaces ashore, or 46 percent of the workforce. Sixty-three additional standards have been developed and are now being assessed for applicability. These standards cover an additional 55,000 spaces, a 10 percent increase. As directed by OPNAVINST 5310.22 the implementation of NAVMEP studies for echelon 1 and 2 activities will be reviewed by the Naval Inspector General (OP-008) as an integral part of a scheduled command inspection. Review of echelon 3 and below activities will be conducted by cognizant echelon 2 Inspector General offices in a similar manner. New SHMD implementation policy will be included in a pending revision to OPNAVINST 5310.16 which will ensure developed and approved standards are applied and used.

- o **FINDING C: Erratic SHORSTAMPS Program Budgeting May Have Contributed To Delayed Progress.** The GAO found that erratic SHORSTAMPS program budgeting continues to exist--see table p. 14, GAO Draft Report. GAO further found that one side effect of fluctuations in funding was increased reliance upon contractors as contract efforts are more easily expanded and contracted than civilian and military personnel levels. GAO also found that funding cuts can have serious effects on

standards development as contractor start-ups and phase-outs cause lost effort and reduce capability. GAO concluded that with funding stability, more realistic goals and objectives can be set, attainment of goals and objectives is more likely to occur, performance can be more realistically measured, and greater confidence can be placed on identified causes of variances from desired performance, thereby, providing managers a more appropriate basis for taking corrective actions. [pp. 8-9, 37]

**DOD RESPONSE:** Concur. Navy recognizes that erratic budgeting impacts on production schedules based upon Level of Effort (LOE) performance and that funding stability will enhance program management and production.

- o **FINDING D: Many Contractor Products Are Poor And Unusable.** During fiscal years 1979-82, the Navy expended on the SHORSTAMPS Program over \$4.5 million for 43 contractor products, however, GAO found that 7 (16 percent) were considered usable, 20 (47 percent) partially usable, and 16 (37 percent)--costing \$2.5 million--unusable. GAO further found that problems associated with using contractors for the development of staffing standards was not new, and in a 1979 report to the House Committee on Armed Services, the Navy pointed out that, using contractor personnel was excessively costly and had not produced desired results. The GAO concluded (by implication) that contracting did not offer the continuity and expertise provided by an in-house work force of military and civilian management engineers. [p. 10]

**DOD RESPONSE:** Concur. All contractor effort associated with staffing standard development has been terminated.

- o **FINDING E: Little Emphasis On Managing And Retaining SHORSTAMPS Trained Analysts Is Costly And May Hamper Development.** GAO found during the current review that the Navy has not implemented the recommendation made in 1980 which required the Navy to establish manpower and personnel management career fields and has done little to emphasize management and retention of SHORSTAMPS trained analysts. GAO further found that (1) with respect to civilians, the Navy implemented a Civilian Career Program in December 1981, however, as of February 1984, the Navy has not approved resources for the development center, and (2) for military personnel the Navy decided to use its Officer Subspecialty and Navy Enlisted Classification systems to provide SHORSTAMPS with the majority of its standards development and manpower management personnel, rather than establishing a career field. The GAO further found the Navy has not established a system to manage its enlisted manpower classifications, and although the Navy makes a considerable investment in training analysts to develop SHORSTAMPS standards it has not taken steps to protect and capitalize on its investment--i.e., the Navy continues to invest heavily in

training military personnel who routinely transfer and has still not established a formal system to manage this expertise. GAO concluded that while the Navy believes its approach accomplishes its objectives, the evidence indicated that the Navy was not actively managing the Officer Manpower Subspecialty to capitalize on second tours and has not developed any formal guidance requiring such management to occur. [pp. 10-12, 37]

**DOD RESPONSE:** Partially Concur. Navy has no plans to establish a manpower and personnel career field for officers and enlisted personnel. Navy will continue to use its Officer Subspecialty and Navy Enlisted Classification systems to provide NAVMEP with the majority of its manpower management personnel rather than establishing a separate manpower management career field. The Manpower, Personnel and Training Analysis (MPTA) Subspecialty defines standards of education and experience for both officer personnel and billet requirements.

The MPTA subspecialty is comprised primarily of Unrestricted Line Officers. These officers must complete required sea tours to stay competitive for promotion and command within their warfare specialty. They are, however, frequently detailed to MPTA subspecialty billets during their shore tours and considerable attention is being paid to retouring these skilled officers. The Navy has billets specifically coded for these subspecialists which are filled as inventory permits in accordance with NMPC-4 INST 5400.1G.

In regard to GAO's recommendation on civilian manpower specialists, the Navy is in the process of establishing a viable career field in Manpower Management for civilian employees. SECNAVINST 12400, establishing DON Manpower Management Civilian Career Program, is now in final review with expected promulgation in January 1985; Manpower Management Career Field Identifier (CFI) codes have been developed which identify approximately 4,000 civilians performing manpower functions; Knowledge, Skills, and Ability (KSA) criteria have been developed for the Management Analyst and Industrial Engineer civilian occupational series.

- o **FINDING F: Lack Of Method Studies In The Standards Development Process May Perpetuate Inefficiencies.** GAO found that method studies continue to be missing from the Navy's SHORSTAMPS staffing standards development process, although as reported by the GAO in 1980, the Navy has recognized the importance of incorporating method studies into the standards development process. GAO further found that although many standards were either being reviewed for currency or scheduled for review, method studies were still not being

performed. GAO concluded that in the absence of such method improvement studies, any standards which are developed are likely to identify staffing needs based, at least in part, on historical inefficiencies which exist in the way various jobs are performed. GAO further concluded that it is concerned that although the SHORSTAMPS plan called for methods improvement studies to occur when standards underwent review, these studies are still not being performed. [pp. 12-13, 38-39]

DOD RESPONSE: Concur. (See discussion in DOD Response to Finding A.)

- o FINDING G: SHOROC Subsystem Data Is Inaccurate. GAO found that although the Navy has rectified some of the Shore Required Operational Capability (SHOROC) subsystem problems, problems still exist, i.e.
- (1) Controls Lacking To Ensure The Accuracy Of Workload Projections-- none of the major manpower commands visited were ensuring that the SHOROC parameter values (workload projections) submitted by activities were accurate; activity department managers, who are called upon to report SHOROC values, generally were not very knowledgeable about SHORSTAMPS or the importance of submitting accurate SHOROC values.
  - (2) Unclear Parameter Definitions May Lead To Inaccurate Data Reporting-- the SHOROC subsystem still does not always provide clear definitions of parameter values and ambiguous definitions continue to contribute to inaccurate data reporting.
  - (3) Billet Occupation Classification (BOC) Codes Need To Be Accurate--many Navy shore authorizations do not have accurate BOC codes assigned to them and problems associated with BOC codes hamper effective and accurate SHORSTAMPS standards.

GAO concluded that the problem of vague or ambiguous definitions was a likely contributor to the problem of inaccurate workload data and consequently inaccurate manpower requirements. GAO further concluded that the efforts should be intensified to clarify SHOROC definitions. [pp. 13-18, 39]

DOD RESPONSE: Concur. Navy is implementing a Navy Manpower Engineering Center Manpower Assessment Team which will analyze all SHOROC and SHOROC-related data and initiate corrective action where necessary on a continual basis. The team will analyze parameter definition problems and trace them to the source of misinterpretation and will also study reported SHOROC parameter values, identifying those values

that require further substantiation. Questionable SHOROC parameters will be referred to Resource Sponsors and/or Functional Sponsors for reconciliation. The team will verify all BOC assignments for funded military and civilian authorizations as well as quantify man-year equivalents for all other manpower resources (reserves, contractors, temporary additional duty (TAD), and transients).

- o **FINDING H: Approved Standards Not Used As Intended.** GAO found that by October 1982, 72 SHORSTAMPS standards reports covering 200,000 shore authorizations were approved for use, however, these standards have been used only minimally to manage manpower and determine staffing requirements (see table p. 20 GAO Draft Report). In addition, GAO found that even when the standards were used, they were not always used in accordance with CNO instructions. For example, civilian authorizations were not being reprogrammed, all available alternatives were not being considered, and annual reapplication of standards was not occurring. GAO concluded that the key factor for the lack of use of manpower standards is the absence of efforts to monitor and enforce the use of standards. GAO further concluded that the Navy should require that staffing standards be used to determine and manage shore manpower in accordance with the CNO promulgation and implementation instructions. [pp. 18-23, 36]

**DOD RESPONSE:** Concur. Navy recognizes that, in the past, standards have not been used to the fullest in manpower management and that deficiencies have existed in monitoring and enforcing the use of the standards. Under SHMD, Navy intends to implement the requisite management control mechanisms to ensure execution monitoring and concomitant enforcement. OPNAVINST 5310.16 will be revised to incorporate these mechanisms. (See DOD Response to Finding B.)

- o **FINDING I: Perceived Impediments To Use Of Standards.** GAO found that commands visited cited a variety of reasons for not using SHORSTAMPS standards. Reasons cited included: (1) some standards were not accurate, (2) automated capability was needed to aid managers in relating SHORSTAMPS generated requirements to authorizations, and (3) little incentive exists for using SHORSTAMPS because using standards was not an essential element of budget success. GAO concluded that there are a number of problems which do not necessarily preclude the application and use of SHORSTAMPS standards, however, they do require users to put forth effort to overcome the problems. GAO further concluded that the obstacles of BOC code inaccuracies and data processing limitations inhibit the use of standards by making the system more cumbersome and difficult to use and these impediments may provide a rationale for not using SHORSTAMPS standards. [pp. 23-25, 40]

**DOD RESPONSE:** Concur. Navy has budgeted for the Total Force Manpower Management System (TFMMS) commencing in FY86. TFMMS will provide the SHMD program with an automated, integrated capability to compute and analyze differences between SHMD standard-derived requirements and manpower resources (military/civilian authorizations, contractor, transient, TAD, overtime, reserve, etc) at the activity, claimant and sponsor levels. TFMMS, in conjunction with the Navy Headquarters Programming System (NHPS) and Navy Headquarters Budgeting System (NHBS) and through the communication network MANCLASS to claimants and sponsors, will encompass all data elements for translating functional requirements into manpower program requirements required for PPBS processes.

- o **FINDING J: No Monitoring and Enforcement Of SHORSTAMPS.** GAO found that the correction of the problems identified will not necessarily result in more use of SHORSTAMPS because of the absence of monitoring and enforcement efforts. GAO further found that the lack of enforcement may contribute to lax command attitudes regarding standards' use and consequent limited implementation. GAO concluded that the lack of action to compel commands to use SHORSTAMPS standards reinforces such perceptions and the selective use of and lack of enforcement has diluted SHORSTAMPS' reputation as the Navy's official manpower planning system for shore based activities. [pp. 25-26, 35-36]

**DOD RESPONSE:** Concur. Navy will monitor and enforce the results of SHMD implementation processes. (See DOD Response to Findings B, G and H.)

- o **FINDING K: The Navy's Alternative To SHORSTAMPS May Not Improve Shore Manpower Management Due to Technical Problems Which Remain In the SHORSTAMPS Program.** GAO found that the Navy approved, in December 1983, an alternative program called NAVMEP, which is aimed at providing a more centralized organization, methods improvement studies and the development of staffing standards at an accelerated rate. GAO further found that as presently constituted, NAVMEP seems to offer some benefits which current systems do not provide, such as consolidating the management of manpower needs determination, which may improve coordination among manpower systems, faster development of staffing standards, which could further acceptance as well as coordination and methods improvement studies, which should increase the accuracy of standards, and the efficiency of the Navy. GAO concluded, however, that many aspects of the NAVMEP plan entail problems which seem likely to nullify its potential benefits. These problems include (1) in the area of staffing standards, the planned use of questionable standards development methodologies and a reduction in resources devoted to manpower planning, which could preclude the performance of methods improvement studies, (2) in regard to workload data, NAVMEP is incorporating SHORSTAMPS without any plans for correcting the

problems that exist in that program, and (3) in the area of application and use of staffing standards, NAVMEP makes no provisions for monitoring and enforcing the use of standards. [p. iv, 28-32]

**DOD RESPONSE:** Partially Concur. The Department does not concur that the Navy Manpower Engineering Program (NAVMEP) will not improve management of shore manpower programs. Although technical, management, and budget problems have existed for the SHORSTAMPS Program, the Navy Manpower Engineering Program will improve shore manpower management for the following reasons:

- It encompasses the Commercial Activities (CA) and Efficiency Review (ER) Programs.
- It uses a variety of accepted industrial engineering methodologies to match requirements to workload.
- It is an iterative process that will achieve efficiency and increasing rigor over time.

The Department concurs that NAVMEP offers benefits which current systems do not provide, such as consolidating the management of manpower needs determination, improved coordination among manpower systems, faster staffing standards development, improved management attention to and acceptance of staffing standards. The end result will produce manpower requirements based on the most efficient organization achievable. Whichever method will produce the most rigorous requirement for a particular function will be the one chosen to determine that requirement. (See DOD Response to Findings A, C, G, H, I and M and DOD position on Recommendation 6.)

- o **FINDING L: Questionable Standards Development Methods Could Jeopardize The Validity Of NAVMEP's Manpower Standards.** GAO found that the modifications which NAVMEP plans to use in the standards development process could jeopardize the accuracy and efficiency in meeting its 2-year timetable. GAO states that reducing the time of the standards development process by one-half will make it difficult to execute the time-consuming collection and analysis of data and also adopting macro-model authorizations and "engineered estimates" may compromise the accuracy and credibility of NAVMEP's staffing standards. GAO further states that while the scope of its review did not include assessing the validity of the Navy's macro-models, the models have been examined and questioned in the past by the GAO, the Department of Defense Inspector General, and the Navy audit reports, which often identified the lack of effective work measurement systems to accurately reflect manpower requirements. In addition, GAO found that the use of "engineered estimates" are not based on any analytical work measurement techniques and employing these estimates as

staffing standards could discredit the NAVMEP program and its products. GAO concluded that the NAVMEP's methodology seemed likely to produce standards in less time--and within the program's goal of 2 years--but potentially at the expense of efficiency, accuracy, credibility, and the ultimate purpose of the program. [pp. iv, 30-32, and 36-37]

**DOD RESPONSE:** Partially Concur. Navy recognizes that reducing the standards development process time by one-half and using macro-model techniques, among others, in the CY85 phase of the program is a compromise between economics and urgency on the one hand and the ultimately required accuracy and credibility of SHMD standards on the other hand. The Navy will not use the "engineered estimate" methodology subsequent to the CY85 phase, nor thereafter. As previously stated in our response to Finding A, this approach is a short-term necessity in order to provide the Navy with a more comprehensive view of manpower needs while concurrently developing more rigorous staffing standards incorporating the efficiency review (methods improvement) process.

In recognition of the need for a more credible approach to macro-modeling, Navy has adopted a new approach to the development of Manpower Estimating Models (MEMs). This new approach is a top-down methodology which is based in part on validated staffing standards and SHOROC data resident in the Navy Manpower Requirements System (NMRS) data base. Thus, this methodology models manpower requirements rather than authorizations. Although these MEMs are not as precise as staffing standards, they are good predictors of manpower and their use will permit the rapid determination of outyear manpower requirements using programmable variables. This emerging capability is described in NAVMECINST 5310.14 (Draft), Manual of Navy Manpower Engineering Program (NAVMEP), Volume VI. The draft will be promulgated by July 1985.

- o **FINDING M: NAVMEP'S Operations Could Be Impaired By Budget Reductions.** GAO found the Navy, in May 1983, significantly reduced the funding levels it had planned for SHORSTAMPS development and implementation from \$109.9 to \$53.8 million for Fiscal Years 1984-89. GAO further found that since the SHORSTAMPS program does not exist as a line item in the Navy's Five-year defense plan of the budget, such funding cuts could effectively terminate the program causing NAVMEP to be hard pressed to realize its objectives unless the personnel and funds eliminated from the analysis centers' fiscal 1985 budget are reinstated. GAO concluded that the operation of the program without these resources could further degrade a standards development process already jeopardized by questionable methods and probably cause the program's goals to slip considerably. GAO further concluded that given past experience, it is questionable that NAVMEP will receive all the resources it needs for its first 2-year phase since erratic budgeting and staffing levels have historically plagued the Navy's manpower program.

[pp. v, 33, and 39]

**DOD RESPONSE:** Partially Concur. GAO was correct at the time of the audit (May 1983), however Navy has since programmed \$111.3 million for FY 85-89 which reinstated prior reductions.

- o **FINDING N: NAVMEP Does Not Address SHORSTAMPS Problems.** GAO found the inclusion of SHORSTAMPS without specific plans to correct its problems will present a significant obstacle for NAVMEP to overcome. One of these problems GAO found was in the area of staffing standards, where SHORSTAMPS does not cover the majority of the Navy's shore authorizations and methods improvement studies have not been incorporated into the standards development process. With regard to workload data GAO found a substantial problem with inaccurate data and lack of management controls to ensure the accuracy of data inputs. GAO also found that the Navy was not enforcing its policy and instructions regarding the use of SHORSTAMPS, and as a result little use has been made of standards which have been approved for Navy-wide use to manage available personnel or justify budgets. GAO concluded that NAVMEP has incorporated SHORSTAMPS without correcting the known flaws and as a result is likely to encounter the same obstacles and problems that contributed to SHORSTAMPS' lack of success. (pp. iv. digest, p. 51, and 58, GAO Draft Report)\*

**DOD RESPONSE:** Non-Concur. NAVMEP was designed to eliminate SHORSTAMPS problems. The key to NAVMEP is its monitoring and enforcement criteria. Implicit in this criteria are the types of initiatives proposed by GAO (Recommendations 1-3) and accepted by the Navy. (See DOD Response to Findings B, F, G, H and K.)

- o **FINDING O: Enforcement Authority and Consolidated Control of Manpower Authorizations Is Still Missing Although NAVMEP Has Consolidated Management of Manpower Programs.** GAO found that while NAVMEP has consolidated the management of several manpower determination programs such as the scheduling, development, and promulgation of staffing standards that establish minimum requirements to perform specific functions, it does not consolidate the control of manpower authorizations. GAO also found that manpower authorizations will continue to be controlled separately by three agents--the Deputy CNO (Manpower, Personnel and Training) for military personnel, the Deputy CNO (Logistics) for contractors, and the Director of Navy Program Planning for civilian employees. GAO points out this division of responsibility was one of the concerns it pointed out in a prior report and it still exists. (See Appendix[IV]) GAO concluded that in addition to not consolidating control of manpower authorizations, the NAVMEP alternative makes no provision for monitoring and enforcing the use of standards for managing and justifying manpower needs. (pp. iv. digest, pp. 51-52, and 58-59, GAO Draft Report)\*

**DOD RESPONSE:** Partially Concur. Navy already has an organization that provides the necessary control of active and reserve military, civilians, and contract effort. The Deputy Chief of Naval Operations (Manpower, Personnel and Training) DCNO (MPT)/(OP-01) is responsible for overall total force management.

\* GAO note: The final report was changed to incorporate DOD's response.

Significant realignments of resources to implement total force management efficiencies recommended by SHMDs or other management analyses can only be accommodated during the development of the Navy's Program Objectives Memorandum (POM) for two reasons:

First, POM development and review is that stage of the Planning, Programming and Budgeting (PPB) cycle when total force adjustments can be evaluated in the context of programmatic priority and distribution decisions;

Secondly, POM development and review are the only points in the PPB cycle at which significant adjustments to end strength and to funding allocation among appropriations can be made. Lead responsibility for civilian as well as military manpower adjustments during POM development is centralized under the DCNO (MPT).

However, the further one moves through the PPB cycle to budget formulation, review, and execution, it becomes progressively more difficult to make adjustments among appropriations as a result of controls imposed by OMB and Congress. For this reason, the budget submission will reflect the total force manpower decisions made in formulating the POM or directed by the Program Decision Memoranda (PDMs). Additionally, any subsequent (minor) adjustments approved by the DCNO (MPT) which are consistent with the PDMs will be reflected in the budget submission.

It must be recognized that, unlike military personnel, civilian personnel are not paid from a single appropriation containing only personnel-related costs, but are paid from a wide variety of appropriations which are not limited to personnel costs. Consequently, in the budget review and budget execution processes, effective control of civilian manpower is exercised through oversight of total resources within an appropriation with emphasis on achieving the mix of personnel and non-personnel resources which will provide for the most efficient performance of the program. Civilian strength is viewed as a resource and, in the context of budget review and execution management, responsibility for civilian manpower, and resource distribution in particular, requires financial oversight.

The DCNO (MPT) is tasked and maintains overview responsibilities and approves all manpower and manpower-related resource adjustments from an MPT perspective. However, to insure that financial resources stay in balance, lead responsibility for manpower, budgeting and budget execution relative to the assignment of ceilings, high grade ceilings and average grade control for civilian position is the responsibility of the

Navy Program Planning Office's Fiscal Management Division (OP-92) with the concurrence and approval of DCNO (MPT).

Contrary to the above finding, the DCNO (Logistics) does not control manpower authorizations, but rather executes the CA Program which results in Most Efficient Organizations (MEOs). The authorization files which are controlled by the DCNO (MPT) are subsequently adjusted to reflect those MEO changes in exactly the same way that the files are adjusted for programming changes.

In regard to the portion of the finding relating to NAVMEP provisions for monitoring and enforcing the use of standards, see DOD Response to Findings G and H.

#### RECOMMENDATIONS

- o RECOMMENDATION 1. The GAO recommended that the Secretary of the Navy direct that commands be required to certify that they have reprogrammed authorizations and resources (both military and civilian) to conform to requirements generated by approved SHORSTAMPS standards. [p. 36]

DOD POSITION. Concur. OPNAVINST 5310.16 (Subj: Promulgation and Implementation of SHORSTAMPS Staffing Standards) will be revised by January 1985 to require a certification (manpower programming/reprogramming actions made) of all standards applied/reapplied annually before each budget cycle. (See DOD Response to Findings H and J.)

- o RECOMMENDATION 2. The GAO recommended that the Secretary of the Navy direct that commands be required to submit SHORSTAMPS justification for any manpower increases requested in any function for which an approved SHORSTAMPS standard exists. [p. 36]

DOD POSITION: Concur. OPNAVINST 1000.16E (Subj: Manual of Navy Total Force Manpower; Promulgation of) will be revised by January 1985 to require SHMD justification for any increases in manpower in any function for which an approved standard exists.

- o RECOMMENDATION 3. The GAO recommended that the Secretary of the Navy direct that commands be required to certify that they have reapplied all applicable standards before each budget cycle. [p. 36]

DOD POSITION: Concur. (See DOD Position on GAO Recommendation 1.)

- o **RECOMMENDATION 4.** The GAO recommended that the Secretary of the Navy direct that commands be required to maintain local records to support and document the initial application and periodic reapplications of the standards. [p. 36]

**DOD POSITION:** Concur. OPNAVINST 5310.16 requires such records to be maintained when the standards are applied/reapplied. Additionally, enforcement of new procedures to be adopted in response to DOD position on Recommendations 1, 2, and 3 will cause appropriate records to be maintained.

- o **RECOMMENDATION 5.** The GAO recommended that the Secretary of the Navy direct the CNO to assign explicit responsibility and authority for monitoring and enforcing the manpower requirements program. [p. 36]

**DOD POSITION:** Concur. The DCNO (MPT) already is responsible for monitoring and enforcing the manpower requirements program.

- o **RECOMMENDATION 6.** The GAO recommended that the Secretary of the Navy establish a program to systematically examine for soundness/rigor all standards, methodologies, and processes to be used by NAVMEP to determine manpower requirements, and where feasible, introduce accepted work measurement techniques. [p. 37]

**DOD POSITION:** Concur. NAVMEP consists of a variety of techniques of which some are more rigorous than others. The short term necessity of using less rigorous techniques between now and end CY85 is a valid use of those methods because they will be used to establish a requirements baseline. However, concurrent with baseline development and as directed by OPNAVINST 5310.22, the implementation of NAVMEP studies for echelon 1 and 2 activities will be reviewed by the Naval Inspector General (OP-008) as an integral part of a scheduled command inspection. Review by echelon 3 and below activities will be conducted by cognizant echelon 2 Inspector General offices in a similar manner. After December 1985, as more efficiency reviews are performed, this baseline will be iteratively evaluated for the express purpose of refining requirements and justifying them by means of the most rigorous technique feasible.

- o **RECOMMENDATION 7.** The GAO recommended that the Secretary of the Navy provide the short-and long-term funding stability necessary for completing standards development and providing for periodic review and updating. [p. 37]

**DOD POSITION:** Concur. Navy will budget appropriate funding and personnel to support the program. As stated in Findings C and M, the Navy recognizes that erratic budgeting impacts

on production schedules based upon Levels of Effort (LOE) performance. The Navy has programmed \$111.3 million for FY's 85-89 to include reinstatement of prior reductions.

- o **RECOMMENDATION 8.** The GAO recommended that the Secretary of the Navy reexamine the Navy's reliance upon contractors for the development of staffing standards. \* [p. 36]

**DOD POSITION:** Concur. An examination was completed and all contractor efforts have been terminated. (See DOD Position on Recommendation 7, above.)

- o **RECOMMENDATION 9.** The GAO recommended that the Secretary of the Navy consider the establishment of a manpower management career field for military personnel, with defined standards of background, education, training, experience, and tenure for positions. During the interim, consider formalizing and implementing a long-range tracking system to capitalize on experience of manpower-trained officers and enlisted personnel. [p. 37]

**DOD POSITION:** Non-Concur. As stated in Finding E, the Navy has no plans to establish a manpower and personnel career field for officers and enlisted personnel. Navy will continue to use its Officer Subspecialty and Navy Enlisted Classification systems to provide NAVMEP with the majority of its manpower management personnel rather than establishing a separate manpower management career field. The Manpower Personnel and Training Analysis (MPTA) Subspecialty defines standards of education and experience for both officer personnel and billet requirements.

- o **RECOMMENDATION 10.** The GAO recommended that the Secretary of the Navy consider expediting the implementation of the Civilian Career Program in manpower management established by the Vice Chief of Naval Operations in September 1981. [p. 37]

**DOD POSITION:** Concur. SECNAVINST 12400 will be promulgated by January 1985. (See DOD Response to Finding E.)

- o **RECOMMENDATION 11.** The GAO recommended that the Secretary of the Navy reconsider NAVMEP's planned use of macro-models as a method of determining manpower requirements. [p. 38]

**DOD POSITION:** Partially Concur. Navy shares the GAO concern over the accuracy and credibility of manpower estimates derived from MACRO-models. Therefore Navy will use MACRO-models developed by manpower claimants such as NAVMAT only to ascertain a baseline of currently funded authorizations which are associated with that methodology. At the same time it is evident that a credible modeling

\* GAO note: The final report was changed to incorporate DOD's response.

methodology will be necessary to transition from functionally oriented SHMD staffing standards to program oriented POM and budget considerations. In recognition of this need Navy has implemented a new approach - Manpower Estimating Models (MEMs). This new approach is to be based on current SHMD staffing standards, ER MEOs, SHOROC Tasking and workload data resident in the Navy Manpower Requirements System (NMRS). This methodology will model manpower requirements and provide the needed crucial link to the PPBS process.

- o RECOMMENDATION 12. The GAO recommended that the Secretary of the Navy direct that the terms "work measurement", "standards", or "engineered" not be used to refer to manpower requirements criteria which have not been developed through the use of accepted work measurement techniques. [p. 38]

DOD POSITION: Concur. The referenced terminology will be used by the Navy only in accordance with the professionally recognized industrial engineering/management engineering definitions and criteria for these terms. (See DOD Reponse to Findings A and L.)

- o RECOMMENDATION 13. The GAO recommended that the Secretary of the Navy consider performing methods studies prior to the development of standards. [p. 39]

DOD POSITION: Concur. As stated in Finding A, an improved baseline will be achieved to which increasingly rigorous methodologies will be applied currently and in following years. Standards development will integrate the efficiency review (methods improvement) and standards development processes to: critically scrutinize manpower and material resources and existing procedures and organizational structures; promote efficiencies and effectiveness; and, incorporate efficiencies into staffing standards. The end result is to produce manpower requirements based on the most efficient organization achievable.

- o RECOMMENDATION 14. The GAO recommended that the Secretary of the Navy commit the short-and long-term funding and staff resource stability necessary for assuring the incorporation of methods improvement studies into the manpower requirements determination process. [p. 39]

DOD POSITION: Concur. As stated in Findings C and M, the Navy agrees that funding stability will enhance program management and production and has included short and long term funding for methods improvement studies in the \$111.3 million programmed for FYs 85-89.

- o RECOMMENDATION 15. The GAO recommended that the Secretary of the Navy direct that efforts be intensified to clarify SHOROC definitions so they are easily understood and less open to misinterpretation. [p. 39]

**DOD POSITION:** Concur. The Navy Manpower Engineering Center Manpower Assessment Team will be established to accomplish this objective. (See DOD Response to Finding G.)

- o **RECOMMENDATION 16.** The GAO recommended that the Secretary of the Navy direct that steps be taken to ensure that submitted parameter values are accurate by (1) monitoring and validating data submissions, (2) requiring that formal record keeping systems on parameter submissions be maintained at the activity level, and (3) educating activity department heads on the importance of accurate parameter value submissions.  
[pp. 40-41]

**DOD POSITION:** Concur. The Navy Manpower Engineering Center Manpower Assessment Team will be used to accomplish items (1) and (3). OPNAVINST 5310.16 already requires item (2) to be done although this will be enhanced by the monitoring and enforcement provisions of NAVMEP. (See DOD Response to Finding G.)

- o **RECOMMENDATION 17.** The GAO recommended that the Secretary of the Navy direct that steps be taken to remove impediments by expediting action to purify the Navy Manpower Data Accounting System (NMDAS) data base so meaningful comparisons between funded authorizations and unfunded requirements can be made.  
[p. 40]

**DOD POSITION:** Concur. Purification of NMDAS is on-going. The Total Force Manpower Management System (TFMMS) to be started in FY86 will use the NMDAS purified data base to develop comparisons between requirements and authorizations. (See DOD Response to Finding I.)

- o **RECOMMENDATION 18.** The GAO recommended that the Secretary of the Navy direct that steps be taken to remove impediments by continuing with the effort to ensure that BOC codes are accurately assigned. [p. 40]

**DOD POSITION:** Concur. The Navy Manpower Engineering Center Manpower Assessment Team will be used to accomplish this objective. (See DOD Response to Findings G and I.)

- o **RECOMMENDATION 19.** The GAO recommended that the Secretary of the Navy direct that steps be taken to remove impediments by requiring the Civilian Position File to be more routinely updated to reflect current authorizations. \*

**DOD POSITION:** Concur. OPNAVINST 5310.22, dated 25 June 1984, requires all authorization files (officer, enlisted, and civilian) to be updated as authorization changes occur. (See DOD Position on Recommendation 2.)

- o **RECOMMENDATION 20.** The GAO recommended that the Secretary of the Navy direct that steps be taken to remove impediments by

\*GAO note: The final report was changed to incorporate DOD's response.

expediting the MANCLASS efforts to provide major commands with automated access to manpower data bases. [p. 40]

**DOD POSITION:** Concur. Current impediments which exist under MANCLASS operations will be eliminated by the Total Force Manpower Management System (TFMMS) which will be started in FY86. MANCLASS operations will be subsumed by TFMMS. (See DOD Response to Finding I.)

- o **RECOMMENDATION 21.** The GAO recommended that the Secretary of the Navy direct that steps be taken to remove impediments by developing a method for translating functional requirements into program requirements. [p. 40]

**DOD POSITION:** Concur. TFMMS, in conjunction with NHPS/NHBS, will encompass all data elements for translating functional requirements into manpower program requirements needed for PPBS purposes. (See DOD Response to Finding I.)

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